

F - Series Air Cooled Condensing Units

Range 11 TR to 118 TR
(38 kW to 415 kW)



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R-22



SKM Air Cooled Condensing Units

F-Series - R22

Contents

Introduction	2	Capacity Control Steps	14
Legend.....	2	Selection Procedure	15
Nomenclature	2	Electrical Hook-up	15
Design Features	3	Field Wiring Schematic	15
General Features	3	Typical Wiring Diagram	16
Main Component Features	4	Electrical Data	17
Optional Features	6	Dimensional Data	20
Engineering Specifications	8	Installation & Application Data	23
Capacity Ratings	10	Typical Refrigeration Piping	24
Compressor Starting	14	Guide Specifications.....	26

Legend

The following legends are used throughout this manual:

cfm..... Cubic feet per minute	MBH..... BTUH x 1000
EER..... Energy Efficiency Ratio	Ph..... Phase
Hz..... Hertz	PI..... Power Input of Compressor
KW..... Kilowatts	SST..... Saturated Suction Temp.
kg..... Kilogram	TR..... Tons of Refrigeration
lbs..... Pounds	V..... Volts
L/S..... Liters per second	

Nomenclature

ACUF-5036YM	
Air Cooled Condensing Unit	Factory Modification Code
F-Series (Semi-Hermetic Discus Compressor)	Power Supply Code
Power Supply Frequency	Y : 380-415V/3Ph/50Hz P : 440V/3Ph/50Hz R : 380V/3Ph/60Hz E : 460V/3Ph/60Hz T : 220V/3Ph/60Hz
Nominal Capacity (TR)	

Introduction

SKM F - Series Air Cooled Condensing Unit have been designed for use on systems with indoor units connected to remote outdoor located Condensing Units. The performance of SKM Air Cooled Condensing Units has been proved in various installations like residential buildings, hotels, motels, schools, etc.

SKM F-Series Air Cooled Condensing Units are the specifiers choice for commercial and industrial applications where highly efficient outdoor Condensing Units need to be matched to an indoor central station air handling unit or coil to get maximum performance advantages of a split system with a low initial cost.

SKM F-Series provides efficient operation; a wide range of design flexibility coupled with a packaged concept requiring the least amount of on-site work.

SKM F - Series Condensing Units are available in 50 Hz and 60 Hz versions ranging in capacity from 11 TR to 101 TR (39.8 to 355.6 kW) at 50 Hz and 13.2 TR to 118 TR (46.5 to 414.5 KW) at 60 Hz using R-22 refrigerant.

SKM offers **F - Series Condensing Units** that are built in the UAE and are specifically designed to meet the requirements of the Gulf's severe climatic conditions.

The **F - Series** features, as standard, operating range of ambient temperatures from 50°F (10°C) to 125°F (52°C), a low design ITD (temperature difference between refrigerant condensing temperatures and ambient air temperature), high efficiency Discus® compressors - all of which translate into lower operating cost and longer life of the unit.

SKM F - Series Air Cooled Condensing Units are constructed and rated in accordance with and conforming to ARI standard 365.

SKM Air Cooled Condensing Units F-Series - R22

Design Features

SKM F-Series Air Cooled Condensing Units have been designed to provide:

- **Low Operating Cost**: One of the lowest KW/Ton in the industry.
- **Low Installation Cost**: On site installation and hook-up is inexpensive.
- **More Value for Money**: Our standard unit includes what many competitors offer as options. Low voltage control circuit transformer for a 24 volt thermostat, fan starter interlocks, etc are all standards.
- **Low Maintenance Costs**: Selection of components is for Gulf environments. Maximum 12 fpi on condenser coil. Low design ITD. High efficiency compressors. Powder coated cabinet panels. TEAO condenser fan motors, class 'F' insulated. All ensure minimal maintenance and very low incidence of spare parts requirement, thereby reducing long term maintenance costs.
- **Greater Design Flexibility**: With 26 models to choose from in 50Hz and an equal number in 60Hz, there will always be a selection that closely matches the designed and required capacity.
- **Guaranteed Performance**: Each condensing unit undergoes rigorous QA/QC procedure during manufacture and each unit is factory tested at various stages of manufacture before dispatch, thereby guaranteeing trouble free performance after installation and commissioning.
- **Safety of Operation**: Each unit comes protected with all safety requirements including fuses, overloads, pressure switches etc., necessary for safe operation of the unit.

All of the above design features, as further detailed ahead make the SKM F-Series Air Cooled Condensing Units

Built in the Gulf...for the world.

General Features

High Energy Efficiency Ratio (EER)

SKM F-Series Air Cooled Condensing Units use exclusively high efficiency semi-hermetic Copeland discus compressors having the unique Discus® valve design.

The EER of F-Series Condensing Unit is substantially higher compared to units using equivalent conventional compressors. EER rating for F-Series Condensing Units at ARI conditions are listed in Tables 6 & 7 for specifications.

Compare the average EER's of SKM units versus industry leaders.

The high operating efficiencies of the F-Series Condensing Units is achieved by the use of the Copeland Discus® compressors and the efficient use of condenser coil surface area and air flow across condenser coil. While most competitors use, on average, higher fin density condenser surfaces, SKM keeping Gulf dust storms in mind and the general level of available maintenance, restricts itself to only 12 FPI or 144 fins per foot (max 2.1 mm fin spacing). This ensures long life of the condenser and the least possibility of blockages on condenser.

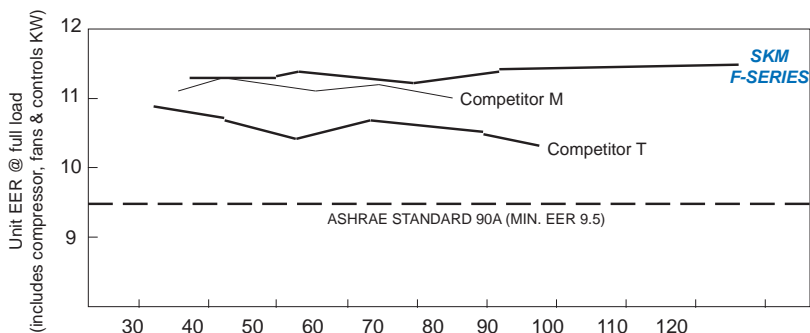
Compare:

Competitor M uses 12, 14 & 15 FPI
Competitor T uses 12, 13 & 14 FPI
Competitor C uses 11.7, 12.4, 14.6, 15, 15.8 and 16.5 FPI

SKM exclusively uses only 12 FPI.

Wide Operating Range

SKM F-Series Condensing Units are designed to operate at a wide range of ambient temperatures from 50°F (10°C), or lower if optional low ambient operation kit is included, to 125°F (52°C), or as high as 131°F (55°C) if optional high ambient operation kit is included. All F-Series units will start and operate within these ranges.



Capacity (Tons @ 95°F amb./45°F SST and Tons @ 35°C amb./7.2°C SST)
Rated as per ARI standard 365/94.

All ratings are for 60Hz units. 50 Hz units of SKM have substantially higher EERs.

SKM Air Cooled Condensing Units

F-Series - R22

Main Component Features

Compressors



Compressors used in F - Series Air Cooled Condensing Units are fully accessible, semi-hermetic, reciprocating type. They are equipped with an oil sight glass, suction and discharge service valves and crankcase heater.

All compressors are refrigerant gas cooled and equipped with an oil pressure lubrication system. The oil pump working in either direction is protected by an oil screen and a valve provided for the fitting of an oil pressure gauge. For protection, all compressors are equipped with preset internal relief valve between suction and discharge sides for safety protection.

The compressors are provided with vibration isolator mounting springs under the compressors skid and therefore, external to Condensing Units, AVM's may be necessary only for critical applications.

The compressor motors have inherent thermal protection. This is in addition to other standard safety and protection controls. Compressors conform to DIN standards.

SKM uses the Copeland Discus® series hi-efficiency compressors exclusively for its F - Series.

Condensers

Condenser coils are manufactured from seamless copper tubes mechanically bonded to aluminium fins to ensure optimum heat transfer. All coils are tested against leakage by air pressure of 450 psig (3100 KPa) under water. All standard coils are 3 or 4 rows/12 FPI, 3/8" (9.5mm) O.D. tubes. An integral



subcooling circuit is provided to increase the Condensing Unit cooling capacity, without additional operating costs.

The sub-cooling effectively eliminates the possibility of liquid flashing, increases unit efficiency and minimizes operating costs.

For different application requirements, other optional condenser fin materials are available:

- Copper fins
- Copper fins electro-tinned after manufacturing
- Precoated Aluminum fins
The pre-coated is hydrophobic polyurethane resin. This option provides substantial corrosion protection beyond standard coil construction.
- Aeris Guard Coil Coating
The Aeris Guard Coil is a self etching high performance modified epoxy finish that is specifically designed to coat and protect Aluminum and Copper surfaces. In addition, the coating is ideal for the protection of ferrous and non ferrous materials.

Condensers Fans & Motors

The condenser fans are propeller type, aluminium alloy blades, directly driven by electric motors. Motors are Totally Enclosed Air Over (TEAO) six pole with class 'F' insulation and minimum IP55 protection. The TEAO and class 'F' insulation features ensure long life



and are unique to SKM. The motors are factory wired, using special silicon wires specially selected for high ambients operation, to Condensing Unit control panel where the motor contactors are located to control the operation of these motors.

The condenser fans are individually statically and dynamically balanced at the factory. Complete fan assembly is provided with suitable acrylic coated fan guard made from heavy gauge galvanised wire.

**All F-Series Condensing Units utilize these specially selected and manufactured components to ensure these units are :
Built in the Gulf...for the world.**

SKM Air Cooled Condensing Units

F-Series - R22

Casing/Structure

Designed for ease of handling and low costs to install. The SKM F - Series Air Cooled Condensing Units are factory assembled and mounted on a rugged steel channel base.

The unit casing used in F-Series condensing units is made of zinc coated galvanized steel sheets conforming to JIS-G 3302 and ASTM A653 which is phosphatized and baked after an electrostatic powder coat of approx. 60 microns.

This finish and coating can pass a 1000 hour in 5 % salt spray testing at 95°F (35°C) and 95% relative humidity as per ASTM B117.

The entire assembly comes complete with lifting holes to ease rigging for installation. Access panels are provided for easy service and maintenance.

Options available include hot dipped galvanized base frame and structural members. Aluminium or stainless steel panels available, on request, as options.

Refrigerant Charge

The F-Series Air Cooled Condensing Units come with a holding charge of R-22 from the factory.

Piping Connections

The F-Series Air Cooled Condensing Units piping connections come, as standard, terminated with sealed and soldered copper pipe ends.

Normal installation would require the cutting off (using roller-type tube cutters) of the ends prior to connections being resoldered and connected to the field supplied refrigerant pipework.

Refrigerant Pipework

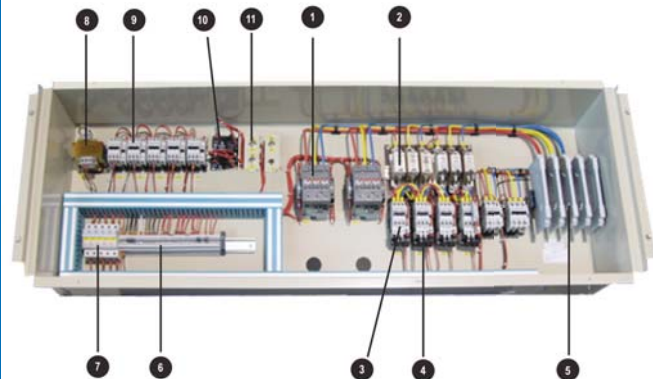
The F-Series Condensing Units come complete with all internal piping, using ACR grade copper tubing, between compressor and condenser.

Refrigeration specialties are available as an option (specify option CRSP) for field connections. Each circuit of an F -Series Condensing Unit, when ordered with this option, would be supplied with a correctly sized thermostatic expansion valve, liquid line solenoid valve with a suitable coil, liquid line sight glass and moisture indicator, and a filter drier having flared or soldered ends isolatable with one shut-off valve or, if specified with option CXFV, with a shut-off valve on each side of the filter drier.

Electrical Control Panel

The unit mounted IP-54 control panel enclosure comprises all starting, operating and safety controls. A dead front panel cover screwed onto the enclosure prevents unauthorized personnel from tampering with controls. Safety and operating controls are arranged for easy accessibility.

All wiring is sized as per NEC regulations. Wiring is fully ferruled enabling ease of proper identification. The control panel is factory wired for 220-240V 1 PH 50/60Hz control power supply. An additional built-in 24 volts fused low voltage transformer, at no extra cost, allows the user to easily hook up his 24 volts room thermostat without taking any burden of arranging and installing a low voltage transformer while commissioning the unit.



Typical Control Panel

Description:

- | | |
|---------------------------|----------------------|
| 1. Compressor Contactor | 7. Control Fuse |
| 2. Power Circuit Fuses | 8. Transformer |
| 3. CFM Contactor | 9. Control Relay |
| 4. CFM Overload Relay | 10. Time Delay Relay |
| 5. Power Terminal Block | 11. ON/OFF Switch |
| 6. Control Terminal Block | |

The following are the **standard** components used in all **ACUF** Air Cooled Condensers:

- Individual compressor and condenser fan motor contactors.
- Fuses for condenser fan per NEC.
- Individual condenser fan over current protection.
- Anti-recycle timer to prevent rapid cycling and short cycling of compressors.
- Low pressure safety switch, high pressure safety switch, oil failure switch one per compressor.
- Head pressure control by fan cycling for low ambient operation down to 50°F (10°C).
- Control disconnect toggle switch.
- Control circuit fuses.
- 24 volts low voltage fused transformer for user supplied and installed room thermostat.
- Volt free contact or terminals for indoor fan motor starter interlock.
- Power and control circuit terminal blocks.

SKM Air Cooled Condensing Units

F-Series - R22

Optional Features

Factory Installed

Microprocessor Based Control (MCP)

The controller consists of modules with on board display and user interface terminals. The modules are available in both panel and DIN rail versions. The controller has compact dimensions and manage package unit with up to 4 steps and 2 circuits. The controller has the following features.

- Built in anti recycle timer to prevent compressor short cycling.
- Auto, lead/lag of the compressor.
- Common alarm available through the dry contact.
- Remote start/stop of the unit.
- Cooling and heating function are available.
- BMS connectivity with external converter (Protocol: MODBUS)

Following parameters can display on the controller LCD:

- Return or space air temperature.
- High pressure, low pressure and air flow alarm.
- Capacity steps.
- Icon of different modes.



The user interface has two options; it could be Remote Terminal and Room Terminal.

Remote terminal:

It is sophisticated graphic LCD for the panel mounting, installation on the unit, or remote wall mounting, for the complete control of the unit. This terminal has an excellent feature for servicing and setting up the unit. It can interface easily through RS485 terminal and require external temperature sensor to control the unit.



Room terminal:

It has LCD with icons for remote wall-mounting in the room as a simple user interface, with built in temperature plus humidity sensor and the band management, for use in residential or smaller commercial services applications. Due to the built in temperature sensor, external sensors are not required.



Low Ambient Operation Kit (LAO)

For operation down to lower than normal Gulf ambients. It is also required for special applications.

High Ambient Operation Kit (HAO)

For operation at reduced load, at ambient temperature between 125°F (52°C) and 131°F (55°C) maximum.

Alternative Condenser Material

Made of copper tubes and alternative fin material and/or protective coats.

- For Copper Fins, specify (FC).
- For Copper Fins only electroplated, specify (CFT)
- For Copper Finned Coils with electroplated after manufacturing, specify (FCT).
- For Pre Coated aluminum fins, specify (FAP).
- For Aluminum Fins with Aeris Coat Protection, specify (FAA).
- For Copper Fins with Aeris Coat Protection, specify (FCA).

Galvanised Frame (GFB)

Hot dip galvanised after manufacture, steel frame and base.

Condenser Coil Guard (CGP)

Coil wire mesh guard, galvanized and painted finish for condensers. Recommended on ground level installations where coil needs to be protected against vandalism.

Part Winding Start (PWS)

Where specifically required by local codes compressors may be with Part Winding Start to reduce the high inrush current at starting. Refer Page 14 table 7 for more details.

Unload Start Kit (USK)

This option is required when the compressor needs a high starting torque such as when the load is high. Not required for compressor models D50 and D60.

SKM Air Cooled Condensing Units

F-Series - R22

Capacity Control Steps (CRS)

To provide additional capacity control steps on the units. See Table 8 (page 14) for optional steps available.

Hot Gas Bypass System (GBP)

With solenoid to enable operation of a large sized unit at very low loads, during low ambients due to application requirements.

Run Hour Meter(s) (RHM)

To monitor operating hours of each compressor.

Voltage Monitoring Module (VMM)

To prevent Condensing Unit operation in the event of :

- Phase burn-out
- Phase reversal
- Under / over voltage on the incoming line voltage.

Voltage Monitoring Module (DVM)

To meet DEWA regulations. This option is available for Dubai, U.A.E. only.

Control Transformer (CXT)

This option is necessary and available for F-Series models rated for 440V/3PH/50Hz or 460V/3PH/60Hz only (3 wire system, no neutral). When ordering for these voltages this option **must** be ordered.

Pressure Gauges (SDG)

Suction, discharge and oil pressure indication of each refrigerant circuit.

IP55 Control Panel (ICP)

The standard control panel replaced by an IP55 enclosure for extra protection against the extreme weather conditions.

Pump Down Control (PDC)

With voltfree contacts for field installed Liquid Line Solenoid Valve, and modified electrical circuit for pump down control. Please specify at enquiry/order option PDC along with option CRSP, if required. Note: Volt free contact for fan interlock is standard with F-Series.

Manual Reset Type High Pressure Switch (MHP)

To replace standard auto reset, capsule type pressure switch.

Lead Lag Switch (LLS)

For double circuit units
Compressor starting sequence to change manually.

External Overload Protection (EOP)

For those electrical specification requires additional overload protection for the compressor.

Options for Field Installations

Anti-vibration mounts (CAVM)

Recommended for roof mounted units or other locations in the vicinity of occupied spaces, where noise may be objectionable.

Liquid Line Controls (CRSP)

Comprises of correctly sized thermostatic expansion valve, suitable solenoid valve, filter drier, sight glass and one number shut-off valve per circuit.

Extra Shut Off Valve (CXFV)

To isolate filter drier on field pipe-work. Must be ordered, if required, with CRSP option.

Hi-Lo and Oil Pressure Gauges (CSDG)

Without piping.

Cooling Only Thermostat (Not with Option MCP) (COTS)

Single or two stage wall mounted type thermostats are available from SKM. When option CRS ordered, customer must obtain thermostats to match total available steps and type desired.

Special custom built units incorporating specially required features like anti-condensation resistance heaters embedded in condenser motors, explosion proof units incorporating open compressors driven by explosion proof motors etc. can be manufactured on request. Consult SKM with detailed requirements.

SKM Air Cooled Condensing Units F-Series - R22

ENGINEERING SPECIFICATIONS - 50 HZ

Model		ACUF	5011	5015	5021	5023	5026	5030	5032	5033	5036	5038	5042	5043	5045				
Cooling Capacity (1)		TR	11.3	14.7	21.5	22.6	26.2	29.5	32.1	32.8	36.2	37.0	42.7	43.1	43.8				
		kW	39.8	51.9	75.5	79.5	92.2	103.7	113.1	115.5	127.4	130.0	150.1	151.7	154.0				
Cooling Capacity (2)		TR	9.9	13.0	18.9	19.8	23.0	25.9	28.2	28.8	31.8	32.0	37.5	37.7	38.6				
		kW	34.8	45.6	66.3	69.5	80.9	91.2	99.0	101.3	112.0	112.7	131.8	132.8	135.6				
EER (1)		Btuh/W	12.3	12.3	11.9	12.3	11.8	11.6	11.8	12.1	12.1	11.2	12.2	12.2	11.8				
Compressor	Type	-	Semi-hermetic Reciprocating Discus 1450 rpm																
	Code	-	D10	D15	D25	D10	D15	D10	D15	D35	D25	D10	D25	D15	D40	D25	D35	D10	D50
	Qty.	-	1	1	1	2	1	1	2	1	1	1	1	1	1	2	1	1	1
	Oil Charge	US Gal	1.0	1.0	1.1	2x1.0	1.0	1.0	2x1.0	1.1	1.1	1.0	1.1	1.0	2.0	2x1.1	1.1	1.0	2.0
		Liter	3.8	3.8	4.0	2x3.8	3.8	3.8	2x3.8	4.3	4.0	3.8	4.0	3.8	7.4	2x4.0	4.3	3.8	7.7
Condenser Coil	Type	-	Air cooled 3 or 4 rows 12 FPI (2.1mm) fin spacing copper tubes aluminum fins																
	Face Area	ft²	13.1	16.6	26.3	26.3	35.6	40.0	40.0	40.0	53.3	53.3	64.0	64.0	64.0				
		m²	1.20	1.50	2.40	2.40	3.35	3.70	3.70	3.70	5.00	5.00	5.90	5.90	5.90				
Condenser Fan	Type	-	Propeller direct drive 960 rpm																
	Code / Qty.	-	823/1	723/2	823/2	823/2	823/3	823/3	823/3	823/3	829/3	829/3	823/4	823/4	823/4				
	Airflow Rate	cfm	8500	11140	17000	17000	25980	26820	25620	25620	32790	32790	37160	37160	37160				
		l/s	4011	5257	8022	8022	12260	12656	12090	12090	15474	15474	17536	17536	17536				
Condenser Motor	Type	-	Totally enclosed air over class 'F' insulation, 6 pole, IP-55 protection																
	Size / Qty.	kW	1.5/1	0.75/2	1.5/2	1.5/2	1.5/3	1.5/3	1.5/3	1.5/3	1.5/3	1.5/3	1.5/4	1.5/4	1.5/4				
	Power Input/Qty.	kW	2.1/1	1.0/2	2.1/2	2.1/2	2.1/3	2.1/3	2.1/3	2.1/3	2.1/3	2.1/3	2.1/4	2.1/4	2.1/4				
Refrigerant (R22) Operating Charge		lbs	8.9	11.1	17.8	2x8.9	10.2+7.6	2x11.1	26.7	17.8+8.9	16.4+10.2	26.6	2x15.8	22.7+8.9	31.6				
		kg	4.0	5.0	8.1	2x4.0	4.6+3.5	2x5.0	12.1	8.1+4.0	7.5+4.6	12.1	2x7.2	10.3+4.0	14.4				
No. Of Refrigerant Circuits		-	1	1	1	2	2	2	1	2	2	1	2	2	1				
Unit Operating Weight		lbs	950	1140	1380	1650	1980	2060	1926	2190	2330	2074	2636	2645	2470				
		kg	431	518	628	750	901	936	876	995	1058	944	1198	1202	1122				

Model		ACUF	5051	5052	5053	5060	5064	5070	5074	5075	5080	5085	5090	5095	5105								
Cooling Capacity (1)		TR	50.5	51.4	52.5	58.2	62.6	68.0	73.5	75.0	80.9	82.3	87.6	94.2	101.1								
		kW	177.7	180.7	184.6	204.7	220.2	239.2	258.6	264.0	284.5	289.4	308.1	331.4	355.6								
Cooling Capacity (2)		TR	44.4	44.7	46.0	50.7	54.8	59.2	63.7	65.9	70.7	72.2	77.1	82.9	88.9								
		kW	156.3	157.2	161.7	178.3	192.6	208.2	224.1	231.8	248.8	254.0	271.3	291.6	312.6								
EER (1)		Btuh/W	11.0	11.3	11.7	11.6	11.7	11.5	11.1	11.5	11.6	11.4	11.8	11.5	11.0								
Compressor	Type	-	Semi-hermatic Reciprocating Discus 1450 rpm																				
	Code	-	D60	D40	D15	D35	D25	D40	D25	D35	D40	D35	D40	D50	D35	D50	D40	D60	D35	D50	D60	D50	D60
	Qty.	-	1	1	1	1	1	1	1	2	1	1	2	1	1	1	1	1	1	2	1	1	2
	Oil Charge	US Gal	1.1	2.0	1.0	1.1	1.1	2.0	2.0	2x1.1	2.0	1.1	2x2.0	2.0	1.1	1.1	2.0	2.0	2.0	2.0	2.0	2.0	2x2.0
		Liter	7.7	7.4	3.8	4.3	4.0	7.4	4.0	2x4.3	7.4	4.3	2x7.4	4.3	4.3	7.4	7.7	4.3	7.7	7.7	7.7	2x7.7	
Condenser Coil	Type	-	Air cooled 3 or 4 rows 12 FPI (2.1mm) fin spacing copper tubes aluminum fins																				
	Face Area	ft²	72.0	72.0	72.0	72.0	72.0	96.0	80.0	80.0	96.0	96.0	106.7	144.4	144.4								
		m²	6.70	6.70	6.70	6.70	6.70	8.90	9.90	9.90	8.90	8.90	9.90	13.40	13.40								
Condenser Fan	Type	-	Propeller direct drive 960 rpm																				
	Code / Qty.	-	829/4	829/4	829/4	829/4	829/4	823/6	829/6	829/6	829/6	829/6	829/6	823/8	829/8								
	Airflow Rate	cfm	43840	43840	43840	42160	42160	55740	57060	57060	61020	61020	63000	75760	87760								
		l/s	20688	20688	20688	19895	19895	26304	26927	26927	28795	28795	29730	35751	41414								
Condenser Motor	Type	-	Totally enclosed air over class "F" insulation, 6 pole, IP-55 protection																				
	Size / Qty.	kW	1.5/4					1.1/6		1.5/6					1.1/8		1.5/8						
	Power Input/Qty.	kW	2.1/4					1.5/6		2.1/6					1.5/8		2.1/8						
Refrigerant (R22) Operating Charge		lbs	35.6	24.7+10.9	20.0+15.6	28.2+17.8	2x23.5	26.1+20.9	2x26.1	31.3+20.9	34.0+28.7	40.9+21.8	2x35.0	38.6+33.2	2x35.9								
		kg	16.2	11.2+5.0	9.1+7.1	12.8+8.1	2x10.7	11.9+9.5	2x11.9	14.2+9.5	15.5+13.0	18.6+9.9	2x15.9	17.5+15.1	2x16.3								
No. Of Refrigerant Circuits		-	1	2	2	2	2	2	2	2	2	2	2	2	2								
Unit Operating Weight		lbs	2610	2800	2835	3030	3100	3475	3540	3660	3890	3900	4180	4850	4900								
		kg	1186	1272	1288	1376	1410	1579	1608	1663	1768	1773	1900	2205	2228								

Table 1

- Cooling capacity and EER are at 95°F (35°C) condenser entering air temp. & 45°F (7.2°C) SST. (According to ARI-365/94 standard).
- Cooling capacity at Gulf conditions : 115°F (46.1°C) condenser entering air temperature & 45°F (7.2°C) SST.
- The approximate operating charge required for the unit when connected to a DX cooling coil. Units are shipped with holding charge only.

Dual circuited units with equal compressors. Other dual circuited units have unequal split and DX coil should be selected accordingly.

SKM Air Cooled Condensing Units F-Series - R22

ENGINEERING SPECIFICATIONS - 60 HZ

Model		ACUF	6014	6018	6025	6027	6031	6035	6037	6038	6042	6044	6050	6051	6053				
Cooling Capacity (1)		TR	13.2	17.1	25.1	26.4	30.6	34.4	37.6	38.4	42.3	43.0	49.8	50.3	51.1				
		kW	46.5	60.3	88.3	93.0	107.6	120.9	132.3	135.1	148.7	151.3	175.2	177.0	179.7				
Cooling Capacity (2)		TR	11.5	15.1	22.0	23.1	26.8	30.2	32.9	33.6	37.1	37.3	43.7	44.0	45.0				
		kW	40.6	53.0	77.5	81.2	94.3	106.2	115.8	118.4	130.5	131.0	153.7	154.8	158.1				
EER (1)		Btuh/W	11.5	11.4	11.1	11.5	10.9	10.8	11.1	11.3	11.2	10.4	11.5	11.5	11.2				
Compressor	Type	-	Semi-hermetic Reciprocating Discus 1750 rpm																
	Code	-	D10	D15	D25	D10	D15	D10	D15	D35	D25	D10	D25	D15	D40	D25	D35	D10	D50
	Qty.	-	1	1	1	2	1	1	2	1	1	1	1	1	1	2	1	1	1
	Oil Charge	US Gal	1.0	1.0	1.1	2x1.0	1.0	1.0	2x1.0	1.1	1.1	1.0	1.1	1.0	2.0	2x1.1	1.1	1.0	2.0
		Liter	3.8	3.8	4.0	2x3.8	3.8	3.8	2x3.8	4.3	4.0	3.8	4.0	3.8	7.4	2x4.0	4.3	3.8	7.7
Condenser Coil	Type	-	Air cooled 3 or 4 rows 12 FPI (2.1mm) fin spacing copper tubes aluminum fins																
	Face Area	ft²	13.1	16.6	26.3	26.3	35.0	40.0	40.0	40.0	53.3	53.3	64.0	64.0	64.0				
		m²	1.2	1.5	2.4	2.4	3.3	3.7	3.7	3.7	5.0	5.0	5.9	5.9	5.9				
Condenser Fan	Type	-	Propeller direct drive 1150 rpm																
	Code / Qty.	-	823/1	723/2	823/2	823/2	823/3	823/3	823/3	823/3	829/3	829/3	823/4	823/4	823/4				
	Airflow Rate	cfm	10360	12820	20720	20720	31680	32670	31230	31230	39660	39660	45240	45240	45240				
		l/s	4889	6050	9778	9778	14950	15417	14737	14737	18716	18716	21349	21349	21349				
Condenser Motor	Type	-	Totally enclosed air over class 'F' insulation, 6 pole, IP-55 protection																
	Size / Qty.	kW	2.2/1	1.1/2	2.2/2		2.2/3						1.5/4						
	Power Input/Qty.	kW	3.0/1	1.5/2	3.0/2		3.0/3						2.0/4						
Refrigerant (R22) Operating Charge		lbs	8.9	11.1	17.8	2x8.9	10.2+7.6	2x11.1	26.7	17.8+8.9	16.4+10.2	26.6	2x15.8	22.7+8.9	31.6				
		kg	4.0	5.0	8.1	2x4.0	4.6+3.5	2x5.0	12.1	8.1+4.0	7.5+4.6	12.1	2x7.2	10.3+4.0	14.4				
No. Of Refrigerant Circuits		-	1	1	1	2	2	2	1	2	2	1	2	2	1				
Unit Operating Weight		lbs	950	1140	1380	1650	1980	2060	1926	2190	2330	2074	2636	2645	2470				
		kg	431	518	628	750	901	936	876	995	1058	944	1198	1202	1122				

Model		ACUF	6061	6062	6063	6070	6075	6080	6085	6090	6095	6100	6105	6110	6120								
Cooling Capacity (1)		TR	58.9	59.8	61.1	68.0	73.1	79.2	85.8	87.6	94.5	96.2	102.4	110.1	117.8								
		kW	207.2	210.4	215.1	239.3	257.2	278.7	301.7	308.3	332.5	338.2	360.3	387.2	414.5								
Cooling Capacity (2)		TR	51.7	52.0	53.5	59.2	63.9	68.9	74.3	76.9	82.6	84.3	90.1	96.8	103.5								
		kW	181.9	182.8	188.2	208.2	224.8	242.3	261.2	270.4	290.5	296.6	317.1	340.3	364.0								
EER (1)		Btuh/W	10.2	10.6	10.9	11.0	11.0	10.9	10.4	10.8	10.9	10.7	11.1	10.9	10.2								
Compressor	Type	-	Semi-hermetic Reciprocating Discus 1750 rpm																				
	Code	-	D60	D40	D15	D35	D25	D40	D25	D35	D40	D35	D40	D50	D35	D50	D40	D60	D35	D50	D60	D50	D60
	Qty.	-	1	1	1	1	1	1	1	1	2	1	1	2	1	1	1	1	2	1	1	2	
	Oil Charge	US Gal	1.1	2.0	1.0	1.1	1.1	2.0	2.0	2x1.1	2.0	1.1	2x2.0	2.0	1.1	1.1	2.0	2.0	2.0	2.0	2.0	2x2.0	
Liter		7.7	7.4	3.8	4.3	4.0	7.4	4.0	2x4.3	7.4	4.3	2x7.4	4.3	4.3	7.4	7.7	4.3	7.7	7.7	7.7	2x7.7		
Condenser Coil	Type	-	Air cooled 3 or 4 rows 12 FPI (2.1mm) fin spacing copper tubes aluminum fins																				
	Face Area	ft²	72.0	72.0	72.0	72.0	72.0	96.0	80.0	80.0	96.0	96.0	106.7	144.4	144.4								
		m²	6.7	6.7	6.7	6.7	6.7	8.9	9.9	9.9	8.9	8.9	9.9	13.4	13.4								
Condenser Fan	Type	-	Propeller direct drive 1150 rpm																				
	Code / Qty.	-	829/4	829/4	829/4	829/4	829/4	823/6	829/6	829/6	829/6	829/6	829/6	829/6	823/8	829/8							
	Airflow Rate	cfm	53040	53040	53040	51040	51040	67860	69780	69780	74160	74160	76320	92320	106160								
		l/s	25030	25030	25030	24086	24086	32023	32929	32929	34996	34996	36015	43566	50097								
Condenser Motor	Type	-	Totally enclosed air over class 'F' insulation, 6 pole, IP-55 protection																				
	Size / Qty.	kW	2.2/4						1.5/6		2.2/6						1.5/8		2.2/8				
	Power Input/Qty.	kW	3.0/4						2.0/6		3.0/6						2.0/8		3.0/8				
Refrigerant (R22) Operating Charge		lbs	35.6	24.7+10.9	20.5+15.6	28.2+17.8	2x23.5	26.1+20.9	2x26.1	31.3+20.9	34.0+28.7	40.9+21.8	2x35.0	38.6+32.2	2x35.9								
		kg	16.2	11.2+5.0	9.1+7.1	12.8+8.1	2x10.7	11.9+9.5	2x11.9	14.2+9.5	15.5+13.0	18.6+9.9	2x15.9	17.5+15.1	2x16.3								
No. Of Refrigerant Circuits		-	1	2	2	2	2	2	2	2	2	2	2	2	2								
Unit Operating Weight		lbs	2610	2800	2835	3030	3100	3475	3540	3660	3890	3900	4180	4850	4900								
		kg	1186	1272	1288	1376	1410	1579	1608	1663	1768	1773	1900	2205	2228								

Table 2

- Cooling capacity and EER are at 95°F (35°C) condenser entering air temp. & 45°F (7.2°C) SST. (According to ARI-365/94 standard).
- Cooling capacity at Gulf conditions : 115°F (46.1°C) condenser entering air temperature & 45°F (7.2°C) SST.
- The approximate operating charge required for the unit when connected to a DX cooling coil. Units are shipped with holding charge only.

Dual circuited units with equal compressors. Other dual circuited units have unequal split and DX coil should be selected accordingly.



SKM Air Cooled Condensing Units

F-Series - R22

CAPACITY RATINGS - 50 HZ

Model ACUF	SST		Condenser Entering Air Temperature °F (°C)											
			95 °F (35°C)			105°F (40°C)			115°F (46°C)			125°F (52°C)		
			Total Capacity		PI	Total Capacity		PI	Total Capacity		PI	Total Capacity		PI
	°F	°C	MBh	kW	kW	MBh	kW	kW	MBh	kW	kW	MBh	kW	kW
5011	35	1.7	113.4	33.2	8.8	106.0	31.1	9.4	98.8	29.0	10.0	91.4	26.8	10.7
	40	4.4	124.2	36.4	9.1	116.3	34.1	9.8	108.4	31.8	10.5	100.4	29.4	11.2
	45	7.2	135.7	39.8	9.5	127.1	37.3	10.3	118.6	34.8	11.0	109.9	32.2	11.8
	50	10.0	147.6	43.3	9.8	138.4	40.6	10.7	129.2	37.9	11.5	124.5	36.5	11.9
5015	35	1.7	148.7	43.6	12.0	139.6	40.9	12.8	130.5	38.3	13.7	121.3	35.6	14.6
	40	4.4	162.5	47.6	12.4	152.6	44.7	13.4	142.7	41.8	14.4	132.8	38.9	15.4
	45	7.2	177.0	51.9	12.9	166.3	48.7	14.0	155.6	45.6	15.0	144.8	42.4	16.1
	50	10.0	192.1	56.3	13.4	180.6	52.9	14.6	169.0	49.5	15.7	163.2	47.8	16.3
5021	35	1.7	216.4	63.4	17.2	202.9	59.5	18.4	189.4	55.5	19.6	175.9	51.5	20.9
	40	4.4	236.4	69.3	17.9	221.9	65.0	19.3	207.3	60.8	20.5	192.8	56.5	21.9
	45	7.2	257.5	75.5	18.7	241.9	70.9	20.1	226.3	66.3	21.5	210.7	61.8	22.9
	50	10.0	279.8	82.0	19.4	263.0	77.1	20.9	246.2	72.2	22.4	237.8	69.7	23.2
5023	35	1.7	226.8	66.5	17.5	212.1	62.2	18.8	197.6	57.9	20.1	182.8	53.6	21.4
	40	4.4	248.5	72.8	18.3	232.7	68.2	19.7	216.9	63.6	21.1	200.8	58.9	22.5
	45	7.2	271.3	79.5	19.0	254.2	74.5	20.5	237.1	69.5	22.0	219.7	64.4	23.6
	50	10.0	295.3	86.6	19.7	276.8	81.1	21.4	258.3	75.7	23.0	249.0	73.0	23.9
5026	35	1.7	263.6	77.3	20.6	247.0	72.4	22.1	230.6	67.6	23.6	214.1	62.7	25.2
	40	4.4	288.4	84.5	21.4	270.6	79.3	23.1	252.7	74.1	24.8	234.7	68.8	26.5
	45	7.2	314.6	92.2	22.2	295.3	86.6	24.1	276.0	80.9	25.9	256.4	75.2	27.8
	50	10.0	342.1	100.3	23.1	321.3	94.2	25.0	300.4	88.0	27.0	289.8	84.9	28.1
5030	35	1.7	297.4	87.2	23.9	279.2	81.8	25.7	261.0	76.5	27.5	242.6	71.1	29.3
	40	4.4	324.9	95.2	24.9	305.2	89.4	26.8	285.4	83.7	28.8	265.5	77.8	30.8
	45	7.2	353.9	103.7	25.9	332.5	97.4	28.0	311.1	91.2	30.1	300.3	88.0	31.2
	50	10.0	384.2	112.6	26.9	361.1	105.8	29.2	338.0	99.1	31.5	326.4	95.7	32.6
5032	35	1.7	324.0	95.0	26.0	303.4	88.9	27.9	282.6	82.8	29.6	262.0	76.8	31.5
	40	4.4	354.1	103.8	27.1	331.8	97.3	29.1	309.5	90.7	31.0	287.3	84.2	33.0
	45	7.2	385.8	113.1	28.1	361.9	106.1	30.2	337.9	99.0	32.3	314.1	92.1	34.5
	50	10.0	419.1	122.8	29.2	393.4	115.3	31.4	367.8	107.8	33.7	342.3	100.3	36.1
5033	35	1.7	330.3	96.8	25.9	309.4	90.7	27.8	288.6	84.6	29.6	267.7	78.5	31.5
	40	4.4	361.3	105.9	27.0	338.8	99.3	29.0	316.3	92.7	31.0	293.8	86.1	33.1
	45	7.2	393.9	115.5	28.1	369.7	108.4	30.3	345.5	101.3	32.4	321.2	94.1	34.7
	50	10.0	428.2	125.5	29.1	402.2	117.9	31.5	376.1	110.2	33.8	363.1	106.4	35.1
5036	35	1.7	365.3	107.1	29.1	342.7	100.4	31.3	320.1	93.8	33.3	297.4	87.2	35.5
	40	4.4	399.1	117.0	30.4	374.7	109.8	32.6	350.3	102.7	34.9	325.8	95.5	37.2
	45	7.2	434.8	127.4	31.6	408.4	119.7	34.0	382.1	112.0	36.5	355.8	104.3	39.0
	50	10.0	472.2	138.4	32.8	443.9	130.1	35.4	415.5	121.8	38.1	401.4	117.6	39.5
5038	35	1.7	372.9	109.3	32.3	347.3	101.8	34.2	321.6	94.3	36.2	296.0	86.8	38.2
	40	4.4	407.3	119.4	33.7	379.8	111.3	35.9	352.2	103.2	38.0	324.8	95.2	40.2
	45	7.2	443.4	130.0	35.2	413.9	121.3	37.5	384.4	112.7	39.8	355.1	104.1	42.3
	50	10.0	481.3	141.1	36.7	449.7	131.8	39.1	418.2	122.6	41.7	402.5	118.0	43.0
5042	35	1.7	430.5	126.2	34.7	403.6	118.3	37.1	376.6	110.4	39.5	349.7	102.5	41.9
	40	4.4	470.2	137.8	36.1	441.2	129.3	38.7	412.1	120.8	41.3	383.3	112.3	44.0
	45	7.2	512.0	150.1	37.6	480.8	140.9	40.4	449.6	131.8	43.2	418.6	122.7	46.1
	50	10.0	555.9	162.9	39.0	522.5	153.1	42.1	489.0	143.3	45.1	472.4	138.5	46.7
5043	35	1.7	434.6	127.4	35.1	406.7	119.2	37.5	378.8	111.0	39.9	350.9	102.8	42.4
	40	4.4	475.0	139.2	36.5	445.0	130.4	39.2	414.9	121.6	41.8	384.9	112.8	44.5
	45	7.2	517.6	151.7	38.0	485.3	142.2	40.8	453.0	132.8	43.7	420.6	123.3	46.7
	50	10.0	562.4	164.8	39.4	527.6	154.6	42.5	492.9	144.5	45.6	475.5	139.4	47.2
5045	35	1.7	438.7	128.6	36.9	411.8	120.7	39.6	385.0	112.8	42.2	357.9	104.9	44.8
	40	4.4	480.9	140.9	38.5	451.8	132.4	41.3	422.8	123.9	44.1	393.5	115.3	47.0
	45	7.2	525.3	154.0	40.0	494.0	144.8	43.0	462.6	135.6	46.1	446.8	131.0	47.6
	50	10.0	571.9	167.6	41.5	538.2	157.7	44.8	504.4	147.8	48.1	487.3	142.8	49.8

Table 3

Shaded Values are at 120°F (49°C) condenser entering air temperature.

Computer Print outs for matched ratings with SKM Air Handling Units are available.

SKM Air Cooled Condensing Units

F-Series - R22

CAPACITY RATINGS - 50 HZ

Model ACUF	SST		Condenser Entering Air Temperature °F (°C)											
			95 °F (35°C)			105°F (40°C)			115°F (46°C)			125°F (52°C)		
	Total Capacity		PI	Total Capacity		PI	Total Capacity		PI	Total Capacity		PI		
	°F	°C	MBh	kW	kW	MBh	kW	kW	MBh	kW	kW	MBh	kW	kW
5051	35	1.7	507.0	148.6	45.1	475.9	139.5	48.2	445.2	130.5	51.2	413.7	121.3	54.2
	40	4.4	555.5	162.8	47.2	521.8	152.9	50.5	488.1	143.1	53.7	453.6	133.0	57.0
	45	7.2	606.4	177.7	49.3	569.8	167.0	52.8	533.1	156.3	56.3	514.5	150.8	58.1
	50	10.0	659.7	193.4	51.5	620.1	181.8	55.2	580.2	170.1	59.0	559.9	164.1	61.0
5052	35	1.7	518.8	152.1	44.5	484.1	141.9	47.3	449.5	131.7	50.1	414.8	121.6	53.1
	40	4.4	566.4	166.0	46.5	529.2	155.1	49.5	491.9	144.2	52.6	454.6	133.2	55.9
	45	7.2	616.5	180.7	48.5	576.5	169.0	51.8	536.4	157.2	55.2	516.4	151.4	56.9
	50	10.0	669.0	196.1	50.5	626.0	183.5	54.1	583.1	170.9	57.8	561.6	164.6	59.7
5053	35	1.7	530.5	155.5	44.1	496.7	145.6	47.1	462.8	135.6	50.1	429.0	125.7	53.2
	40	4.4	579.0	169.7	46.1	542.5	159.0	49.3	506.1	148.3	52.5	469.9	137.7	55.9
	45	7.2	629.9	184.6	48.0	590.8	173.2	51.4	551.7	161.7	54.9	532.3	156.0	56.8
	50	10.0	683.4	200.3	49.9	641.5	188.0	53.6	599.6	175.8	57.4	578.9	169.7	59.4
5060	35	1.7	587.5	172.2	49.6	548.5	160.8	52.8	509.3	149.3	56.0	470.3	137.8	59.2
	40	4.4	641.6	188.1	51.9	599.6	175.8	55.3	557.6	163.4	58.7	515.8	151.2	62.3
	45	7.2	698.6	204.7	54.1	653.5	191.5	57.8	608.4	178.3	61.5	563.6	165.2	65.4
	50	10.0	758.3	222.3	56.3	710.0	208.1	60.3	661.8	194.0	64.3	637.8	186.9	66.4
5064	35	1.7	633.1	185.6	53.4	592.2	173.6	57.0	551.3	161.6	60.5	510.6	149.7	64.2
	40	4.4	690.8	202.5	55.7	646.8	189.6	59.6	602.9	176.7	63.4	559.3	163.9	67.5
	45	7.2	751.4	220.2	58.1	704.2	206.4	62.2	657.1	192.6	66.4	633.7	185.7	68.6
	50	10.0	814.9	238.9	60.4	764.4	224.0	64.8	714.0	209.3	69.4	689.0	202.0	71.8
5070	35	1.7	687.3	201.4	59.1	641.3	188.0	62.9	595.2	174.5	66.6	549.4	161.0	70.5
	40	4.4	750.1	219.9	61.8	700.7	205.4	65.8	651.3	190.9	69.9	602.2	176.5	74.2
	45	7.2	816.1	239.2	64.5	763.1	223.7	68.8	710.2	208.2	73.2	683.9	200.4	75.5
	50	10.0	885.4	259.5	67.1	828.6	242.9	71.8	772.0	226.3	76.6	743.9	218.0	79.2
5074	35	1.7	742.4	217.6	64.8	691.3	202.6	68.7	640.1	187.6	72.6	589.1	172.7	76.7
	40	4.4	810.6	237.6	67.8	755.7	221.5	72.0	700.8	205.4	76.3	646.1	189.4	80.8
	45	7.2	882.2	258.6	70.8	823.4	241.3	75.3	764.6	224.1	80.0	735.3	215.5	82.4
	50	10.0	957.4	280.6	73.8	894.3	262.1	78.7	831.5	243.7	83.8	800.2	234.5	86.4
5075	35	1.7	755.0	221.3	63.7	707.6	207.4	68.1	660.4	193.6	72.5	612.9	179.6	77.0
	40	4.4	825.9	242.1	66.4	774.9	227.1	71.1	723.9	212.2	75.9	672.7	197.2	80.8
	45	7.2	900.6	264.0	69.1	845.7	247.9	74.2	790.8	231.8	79.3	763.3	223.7	82.0
	50	10.0	978.9	286.9	71.8	919.9	269.6	77.3	860.9	252.3	82.8	831.3	243.7	85.7
5080	35	1.7	813.2	238.3	69.1	760.5	222.9	73.7	708.0	207.5	78.2	655.2	192.1	82.9
	40	4.4	889.9	260.8	72.0	833.3	244.2	77.0	776.6	227.6	82.0	719.8	211.0	87.1
	45	7.2	970.8	284.5	75.0	909.8	266.7	80.4	848.9	248.8	85.7	787.8	230.9	91.4
	50	10.0	1055.7	309.4	78.0	990.2	290.2	83.7	924.7	271.0	89.5	891.9	261.4	92.6
5085	35	1.7	827.4	242.5	71.5	775.8	227.4	76.3	724.5	212.4	81.1	672.5	197.1	86.0
	40	4.4	905.4	265.4	74.7	849.6	249.0	79.9	793.8	232.7	85.0	737.3	216.1	90.4
	45	7.2	987.3	289.4	77.9	927.0	271.7	83.5	866.6	254.0	89.1	836.1	245.1	92.0
	50	10.0	1073.3	314.6	81.1	1008.2	295.5	87.1	942.9	276.4	93.2	909.9	266.7	96.3
5090	35	1.7	877.7	257.3	73.9	823.8	241.5	79.1	770.2	225.8	84.3	716.1	209.9	89.7
	40	4.4	962.1	282.0	76.9	904.0	265.0	82.6	846.0	248.0	88.2	787.3	230.8	94.0
	45	7.2	1051.0	308.1	79.9	988.4	289.7	86.0	925.6	271.3	92.1	894.1	262.1	95.3
	50	10.0	1144.4	335.4	83.0	1076.9	315.6	89.5	1009.2	295.8	96.1	975.2	285.8	99.5
5095	35	1.7	945.0	277.0	82.2	887.0	260.0	87.8	829.5	243.1	93.4	771.0	226.0	99.1
	40	4.4	1035.5	303.5	85.8	972.8	285.1	91.9	910.2	266.8	97.9	846.3	248.1	104.1
	45	7.2	1130.7	331.4	89.4	1062.9	311.5	96.0	994.9	291.6	102.5	960.4	281.5	105.9
	50	10.0	1230.6	360.7	93.1	1157.3	339.2	100.1	1083.6	317.6	107.2	1046.2	306.6	110.8
5105	35	1.7	1014.2	297.3	90.3	952.2	279.1	96.3	890.7	261.1	102.3	827.7	242.6	108.4
	40	4.4	1111.3	325.7	94.4	1043.9	306.0	100.9	976.6	286.2	107.4	907.5	266.0	114.1
	45	7.2	1213.2	355.6	98.7	1140.1	334.2	105.6	1066.7	312.6	112.7	1029.3	301.7	116.2
	50	10.0	1320.0	386.9	102.9	1240.7	363.7	110.4	1160.9	340.3	118.0	1120.2	328.3	121.9

Table 4

Shaded Values are at 120°F (49°C) condenser entering air temperature.

Computer Print outs for matched ratings with SKM Air Handling Units are available.



SKM Air Cooled Condensing Units

F-Series - R22

CAPACITY RATINGS - 60 HZ

Model ACUF	SST		Condenser Entering Air Temperature °F (°C)											
			95 °F (35°C)			105°F (40°C)			115°F (46°C)			125°F (52°C)		
	Total Capacity		PI	Total Capacity		PI	Total Capacity		PI	Total Capacity		PI		
	°F	°C	MBh	kW	kW	MBh	kW	kW	MBh	kW	kW	MBh	kW	kW
6014	35	1.7	132.7	38.9	10.7	124.1	36.4	11.4	115.5	33.9	12.2	106.8	31.3	12.9
	40	4.4	145.3	42.6	11.1	136.0	39.9	11.9	126.7	37.1	12.8	117.3	34.4	13.6
	45	7.2	158.6	46.5	11.6	148.5	43.5	12.5	138.4	40.6	13.4	133.3	39.1	13.9
	50	10.0	172.4	50.5	12.0	161.6	47.4	13.0	150.7	44.2	14.0	145.2	42.5	14.5
6018	35	1.7	173.4	50.8	14.6	162.7	47.7	15.7	152.0	44.5	16.7	141.2	41.4	17.8
	40	4.4	189.2	55.5	15.2	177.6	52.1	16.4	166.0	48.7	17.5	160.2	46.9	18.1
	45	7.2	205.8	60.3	15.9	193.3	56.7	17.1	180.7	53.0	18.4	174.4	51.1	19.0
	50	10.0	223.3	65.4	16.5	209.7	61.5	17.9	196.1	57.5	19.3	189.3	55.5	20.0
6025	35	1.7	253.5	74.3	20.9	237.6	69.6	22.3	221.7	65.0	23.8	205.8	60.3	25.2
	40	4.4	276.8	81.1	21.8	259.7	76.1	23.4	242.5	71.1	24.9	225.5	66.1	26.5
	45	7.2	301.3	88.3	22.7	282.9	82.9	24.4	264.5	77.5	26.0	246.2	72.2	27.8
	50	10.0	327.1	95.9	23.6	307.3	90.1	25.4	287.6	84.3	27.2	277.8	81.4	28.2
6027	35	1.7	265.4	77.8	21.3	248.2	72.7	22.8	231.1	67.7	24.3	213.7	62.6	25.9
	40	4.4	290.6	85.2	22.2	272.0	79.7	23.9	253.5	74.3	25.5	234.5	68.7	27.3
	45	7.2	317.1	93.0	23.1	297.0	87.1	24.9	276.9	81.2	26.8	266.7	78.2	27.7
	50	10.0	344.8	101.1	24.0	323.2	94.7	26.0	301.4	88.3	28.0	290.3	85.1	29.1
6031	35	1.7	307.9	90.3	25.1	288.6	84.6	26.9	269.3	78.9	28.7	249.7	73.2	30.6
	40	4.4	336.7	98.7	26.1	315.8	92.5	28.1	294.8	86.4	30.1	273.5	80.2	32.2
	45	7.2	367.0	107.6	27.2	344.3	100.9	29.4	321.6	94.3	31.5	310.1	90.9	32.7
	50	10.0	398.6	116.8	28.3	374.2	109.7	30.6	349.6	102.5	33.0	337.2	98.8	34.2
6035	35	1.7	347.4	101.8	29.1	325.9	95.5	31.3	304.6	89.3	33.4	282.9	82.9	35.5
	40	4.4	379.2	111.1	30.4	356.0	104.3	32.7	332.7	97.5	35.0	321.0	94.1	36.2
	45	7.2	412.5	120.9	31.7	387.4	113.6	34.2	362.3	106.2	36.7	349.6	102.5	38.0
	50	10.0	447.5	131.2	33.0	420.4	123.2	35.7	393.2	115.2	38.4	379.5	111.2	39.9
6037	35	1.7	379.6	111.3	31.6	355.2	104.1	33.7	330.8	97.0	35.9	306.5	89.8	38.1
	40	4.4	414.5	121.5	32.9	388.3	113.8	35.2	362.1	106.1	37.5	336.0	98.5	40.0
	45	7.2	451.3	132.3	34.2	423.2	124.0	36.7	395.0	115.8	39.2	367.1	107.6	41.9
	50	10.0	490.0	143.6	35.5	459.8	134.8	38.2	429.6	125.9	41.0	414.7	121.5	42.4
6038	35	1.7	386.9	113.4	31.5	362.3	106.2	33.7	337.8	99.0	35.9	313.2	91.8	38.1
	40	4.4	422.9	123.9	32.8	396.4	116.2	35.2	370.0	108.4	37.6	343.4	100.7	40.1
	45	7.2	460.8	135.1	34.2	432.3	126.7	36.8	403.8	118.4	39.4	375.2	110.0	42.1
	50	10.0	500.5	146.7	35.5	469.9	137.7	38.3	439.3	128.7	41.1	423.9	124.3	42.6
6042	35	1.7	426.9	125.1	35.5	400.3	117.3	38.0	373.7	109.5	40.5	347.0	101.7	43.0
	40	4.4	466.0	136.6	37.0	437.3	128.2	39.7	408.6	119.8	42.4	379.8	111.3	45.2
	45	7.2	507.2	148.7	38.6	476.2	139.6	41.5	445.3	130.5	44.4	429.8	126.0	45.9
	50	10.0	550.4	161.3	40.1	517.1	151.6	43.2	483.8	141.8	46.5	467.2	136.9	48.1
6044	35	1.7	435.0	127.5	39.2	404.9	118.7	41.6	374.7	109.8	43.9	344.7	101.0	46.3
	40	4.4	474.6	139.1	41.1	442.3	129.6	43.6	410.0	120.2	46.1	377.9	110.8	48.8
	45	7.2	516.3	151.3	42.9	481.6	141.2	45.6	447.1	131.0	48.4	429.8	126.0	49.9
	50	10.0	559.9	164.1	44.8	522.8	153.2	47.7	485.9	142.4	50.8	467.5	137.0	52.4
6050	35	1.7	503.4	147.5	42.1	471.7	138.3	45.0	440.0	129.0	47.8	408.4	119.7	50.8
	40	4.4	549.4	161.0	44.0	515.2	151.0	47.1	481.1	141.0	50.2	447.2	131.1	53.4
	45	7.2	597.7	175.2	45.8	561.1	164.5	49.2	524.5	153.7	52.5	506.3	148.4	54.3
	50	10.0	648.5	190.1	47.7	609.2	178.6	51.3	570.0	167.1	54.9	550.5	161.3	56.8
6051	35	1.7	507.9	148.9	42.6	475.1	139.3	45.5	442.3	129.6	48.4	409.5	120.0	51.4
	40	4.4	554.8	162.6	44.5	519.5	152.3	47.6	484.1	141.9	50.7	448.8	131.5	54.0
	45	7.2	604.0	177.0	46.3	566.0	165.9	49.7	528.0	154.8	53.1	509.1	149.2	54.9
	50	10.0	655.7	192.2	48.2	614.9	180.2	51.8	574.1	168.3	55.6	553.7	162.3	57.5
6053	35	1.7	512.9	150.3	44.9	481.2	141.0	48.1	449.7	131.8	51.2	417.7	122.4	54.4
	40	4.4	561.7	164.6	46.9	527.6	154.6	50.2	493.5	144.6	53.6	458.9	134.5	57.1
	45	7.2	613.1	179.7	48.8	576.3	168.9	52.4	539.4	158.1	56.1	520.8	152.7	58.0
	50	10.0	667.0	195.5	50.7	627.4	183.9	54.6	587.6	172.2	58.6	567.5	166.3	60.6

Table 5

Shaded Values are at 120°F (49°C) condenser entering air temperature.

Computer Print outs for matched ratings with SKM Air Handling Units are available.

SKM Air Cooled Condensing Units

F-Series - R22

CAPACITY RATINGS - 60 HZ

Model ACUF	SST		Condenser Entering Air Temperature °F (°C)											
			95 °F (35°C)			105°F (40°C)			115°F (46°C)			125°F (52°C)		
	°F	°C	Total Capacity MBh	kW	PI	Total Capacity MBh	kW	PI	Total Capacity MBh	kW	PI	Total Capacity MBh	kW	PI
6061	35	1.7	592.0	173.5	54.9	555.7	162.9	58.5	519.5	152.3	62.1	482.2	141.3	65.7
	40	4.4	648.1	190.0	57.6	608.6	178.4	61.4	569.0	166.8	65.3	548.7	160.8	67.3
	45	7.2	706.8	207.2	60.2	663.9	194.6	64.4	620.7	181.9	68.6	598.5	175.4	70.7
	50	10.0	768.2	225.2	62.9	721.7	211.5	67.4	674.6	197.7	72.0	650.5	190.7	74.3
6062	35	1.7	605.1	177.4	54.1	564.4	165.4	57.5	523.7	153.5	60.8	483.0	141.6	64.4
	40	4.4	660.1	193.5	56.6	616.3	180.6	60.3	572.6	167.8	63.9	550.7	161.4	65.9
	45	7.2	717.8	210.4	59.1	670.8	196.6	63.1	623.8	182.8	67.1	600.3	176.0	69.3
	50	10.0	778.1	228.1	61.7	727.7	213.3	66.0	677.4	198.5	70.4	652.2	191.2	72.8
6063	35	1.7	619.1	181.4	53.8	579.3	169.8	57.3	539.4	158.1	60.8	499.9	146.5	64.5
	40	4.4	675.0	197.8	56.2	632.2	185.3	60.0	589.5	172.8	63.8	568.2	166.5	65.8
	45	7.2	733.7	215.1	58.6	687.8	201.6	62.7	642.0	188.2	66.9	619.3	181.5	69.1
	50	10.0	795.3	233.1	61.1	746.1	218.7	65.5	697.1	204.3	70.1	672.8	197.2	72.5
6070	35	1.7	687.7	201.6	60.2	641.7	188.1	64.0	595.6	174.6	67.7	549.7	161.1	71.7
	40	4.4	750.5	220.0	63.0	701.0	205.5	67.0	651.6	191.0	71.1	602.5	176.6	75.5
	45	7.2	816.5	239.3	65.7	763.4	223.8	70.1	710.5	208.2	74.6	684.1	200.5	76.9
	50	10.0	885.6	259.6	68.5	828.9	242.9	73.2	772.2	226.3	78.1	744.0	218.1	80.7
6075	35	1.7	740.6	217.1	64.8	692.5	203.0	69.1	644.4	188.9	73.3	596.6	174.9	77.7
	40	4.4	807.5	236.7	67.7	755.8	221.5	72.3	704.2	206.4	76.9	678.5	198.9	79.3
	45	7.2	877.7	257.2	70.7	822.2	241.0	75.6	767.0	224.8	80.6	739.5	216.7	83.3
	50	10.0	951.2	278.8	73.6	891.8	261.4	78.9	832.7	244.1	84.4	803.4	235.5	87.4
6080	35	1.7	802.2	235.1	71.9	748.1	219.3	76.3	694.1	203.4	80.7	640.3	187.7	85.4
	40	4.4	874.8	256.4	75.2	816.7	239.4	80.0	758.8	222.4	84.8	729.9	213.9	87.4
	45	7.2	950.9	278.7	78.6	888.7	260.5	83.7	826.7	242.3	89.0	795.8	233.3	91.8
	50	10.0	1030.6	302.1	82.0	964.1	282.6	87.5	897.8	263.1	93.4	864.8	253.5	96.5
6085	35	1.7	867.5	254.3	78.6	807.4	236.6	83.3	747.2	219.0	87.9	687.3	201.5	92.9
	40	4.4	946.4	277.4	82.3	881.9	258.5	87.4	817.4	239.6	92.4	753.3	220.8	97.9
	45	7.2	1029.3	301.7	86.1	960.1	281.4	91.5	891.1	261.2	97.1	856.8	251.1	100.0
	50	10.0	1116.0	327.1	89.8	1042.0	305.4	95.7	968.3	283.8	101.8	931.6	273.1	105.1
6090	35	1.7	883.0	258.8	77.4	827.4	242.5	82.6	771.8	226.2	87.9	715.8	209.8	93.3
	40	4.4	965.3	282.9	80.8	905.4	265.4	86.4	845.4	247.8	92.1	815.3	239.0	95.0
	45	7.2	1051.8	308.3	84.2	987.3	289.4	90.3	922.7	270.4	96.4	890.3	260.9	99.6
	50	10.0	1142.3	334.8	87.6	1073.0	314.5	94.1	1003.6	294.2	100.9	968.9	284.0	104.4
6095	35	1.7	951.6	278.9	83.8	889.7	260.8	89.3	827.8	242.6	94.7	765.7	224.4	100.4
	40	4.4	1040.7	305.0	87.5	974.1	285.5	93.4	907.5	266.0	99.4	840.6	246.4	105.6
	45	7.2	1134.5	332.5	91.3	1062.8	311.5	97.6	991.1	290.5	104.1	955.2	280.0	107.4
	50	10.0	1232.7	361.3	95.0	1155.8	338.8	101.8	1078.8	316.2	108.8	1040.3	304.9	112.5
6100	35	1.7	968.4	283.8	86.8	907.8	266.1	92.5	847.3	248.4	98.2	785.9	230.4	104.1
	40	4.4	1058.9	310.4	90.8	993.3	291.1	97.0	927.6	271.9	103.1	860.9	252.3	109.6
	45	7.2	1153.9	338.2	94.8	1083.0	317.4	101.5	1011.8	296.6	108.2	975.8	286.0	111.6
	50	10.0	1253.3	367.3	98.9	1176.8	344.9	106.0	1099.8	322.4	113.3	1061.0	311.0	117.1
6105	35	1.7	1028.0	301.3	89.7	964.6	282.7	95.9	901.5	264.2	102.2	837.5	245.5	108.6
	40	4.4	1126.1	330.1	93.5	1057.8	310.0	100.2	989.4	290.0	107.0	920.1	269.7	114.0
	45	7.2	1229.3	360.3	97.3	1155.7	338.7	104.6	1081.8	317.1	111.9	1044.5	306.1	115.6
	50	10.0	1337.6	392.0	101.1	1258.2	368.8	108.9	1178.5	345.4	116.8	1138.4	333.7	120.9
6110	35	1.7	1105.7	324.1	99.8	1037.7	304.2	106.5	970.0	284.3	113.2	900.7	264.0	120.1
	40	4.4	1210.8	354.9	104.4	1137.2	333.3	111.6	1063.3	311.7	118.8	1025.9	300.7	122.5
	45	7.2	1321.1	387.2	108.9	1241.4	363.9	116.7	1161.2	340.3	124.6	1120.5	328.4	128.6
	50	10.0	1436.6	421.1	113.6	1350.4	395.8	121.9	1263.5	370.3	130.4	1219.3	357.4	134.8
6120	35	1.7	1184.4	347.2	109.8	1111.8	325.9	117.0	1039.4	304.6	124.2	964.7	282.8	131.5
	40	4.4	1296.6	380.0	115.1	1217.6	356.9	122.8	1138.3	333.6	130.6	1097.9	321.8	134.5
	45	7.2	1414.2	414.5	120.4	1328.4	389.4	128.7	1241.8	364.0	137.1	1197.6	351.0	141.4
	50	10.0	1537.1	450.5	125.8	1444.1	423.3	134.8	1349.8	395.6	143.9	1301.7	381.5	148.6

Table 6

Shaded Values are at 120°F (49°C) condenser entering air temperature.

Computer Print outs for matched ratings with SKM Air Handling Units are available.



SKM Air Cooled Condensing Units F-Series - R22

Compressor Starting

The F-Series Condensing Unit are provided, as standard mode of compressor starting as per Table 7.

All Air Cooled Condensing Units F-Series with standard DOL start compressors as shown, do not, generally, require part winding start.

Maximum Instantaneous Current Flow as shown in Tables 10-14 (pages 17-19), must be used in determining the need for such part winding start.

If part winding start is required, please specify option PWS at enquiry/order, available only for the models shown with PWS as option in Table 7.

NOTE:

PWS in D10/D15 compressors is available only for power supplies 380-415-440/3/50 and 460/3/60.

MODEL ACUF		POWER SUPPLY (V/PH/Hz)					
		380, 415, 440/3/50 & 460/3/60		380/3/60		220/3/60	
		Standard	Option	Standard	Option	Standard	Option
5011	6014	DOL	PWS	DOL	-	DOL	-
5015	6018				PWS		PWS
5021	6025				-		-
5023	6027				PWS	PWS	-
5026	6031				-	DOL	-
5030	6035				PWS	PWS	-
5032	6037				-	DOL	-
5033	6038				PWS	PWS	-
5036	6042				-	DOL	-
5038	6044				PWS	PWS	-
5042	6050				-	DOL	PWS
5043	6051				-	-	-
5045	6053			PWS	-	PWS	-
5051	6061			DOL	-	DOL	-
5052	6062				PWS		PWS
5053	6063				-	PWS	-
5060	6070				-		-
5064	6075				-		-
5070	6080				-		-
5074	6085				-		-
5075	6090				-		-
5080	6095				-		-
5085	6100				-		-
5090	6105				-		-
5095	6110				-		-
5105	6120			PWS	-		-

Table 7

Capacity Control Steps

The number of capacity control steps required is determined by application and load. For loads with a wide variation and desired operation over a longer operational season extending beyond summer months it is recommended that option CRS be considered.

Optional steps (specify option CRS) as shaded, require a factory certified wiring diagram. Please furnish the details of user supplied and installed thermostat in order for factory to provide the certified wiring diagram compatible with the thermostat. Failure to furnish the details required at the time of order will result in units being supplied as per the standard Wiring Schematic of SKM.

ACUF		Standard	No. of Steps	Optional	No. of Steps
5011	6014	100-0	1	100-66-0	2
5015	6018	100-0	1	100-66-0	2
5021	6025	100-0	1	100-50-0	2
5023	6027	100-50-0	2	100-83-50-33-0	4
5026	6031	100-57-0	2	100-57-38-0	3
5030	6035	100-50-0	2	100-83-50-33-0	4
5032	6037	100-0	1	100-66-0	2
5033	6038	100-66-0	2	100-66-33-0	3
5036	6042	100-62-0	2	100-62-31-0	3
5038	6044	100-0	1	100-66-0	2
5042	6050	100-50-0	2	100-75-50-25-0	4
5043	6051	100-72-0	2	100-72-48-0	3
5045	6053	100-0	1	100-75-50-0	3
5051	6061	100-0	1	100-75-50-0	3
5052	6062	100-69-0	2	100-69-46-0	3
5053	6063	100-56-0	2	100-56-37-0	3
5060	6070	100-60-0	2	100-60-40-0	3
5064	6075	100-50-0	2	100-83-50-33-0	4
5070	6080	100-55-0	2	100-85-55-36-0	4
5074	6085	100-50-0	2	100-83-50-33-0	4
5075	6090	100-60-0	2	100-86-60-45-0	4
5080	6095	100-54-0	2	100-84-54-36-0	4
5085	6100	100-65-0	2	100-83-65-49-0	4
5090	6105	100-50-0	2	100-88-50-38-0	4
5095	6110	100-54-0	2	100-89-54-41-0	4
5105	6120	100-50-0	2	100-88-50-38-0	4

Table 8

SKM Air Cooled Condensing Units F-Series - R22

Selection Procedure

Example

The following information should be determined:

1. Required total capacity = 488 Mbh (143 kW)
2. Saturated suction temperature = 40°F (4.4°C)
3. Condenser entering air temperature = 115°F (46°C)
4. Power Supply (V/PH/Hz) = 380/3/50

Enter capacity ratings from Table 4 at 115°F (46°C) condenser entering air temperature and select model ACUF 5051 having a cooling capacity of 488.1 Mbh (143.1 kW) at 40°F (4.4°C) saturated suction temperature, compressor motor power input is 53.7 kW. For further details refer to physical data and specifications sheets.

Capacity ratings are based on sea level operation. Above sea level, apply the following corrections method.

Actual capacity (at level) = Sea level capacity x altitude correction factor (from Table 9).

Altitude Correction Factors

The unit ratings are based on sea level. Above sea level apply the following correction factors:

Altitude		Capacity	Power
feet	meter	Multiplier	Multiplier
0	0	1	1
2000	610	0.99	1.01
4000	1219	0.98	1.02
6000	1829	0.97	1.03
8000	2438	0.96	1.04
10000	3048	0.95	1.05

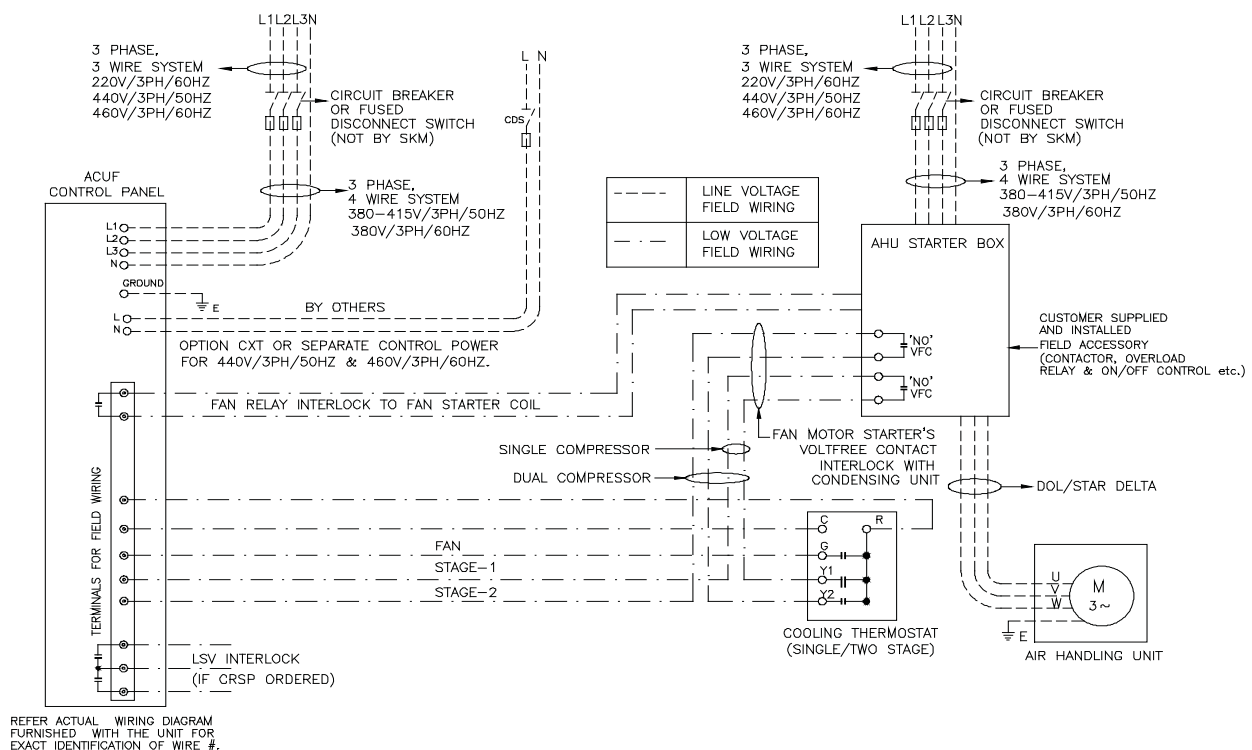
Table 9

Electrical Hook-Up

Every SKM F-Series Condensing Unit requires, at most, field intalled fused disconnect switches or circuit breakers, fan interlocks and 24 volt temperature control thermostat. Refer to typical wiring diagram (page 16) for schematic representation of required field electrical hook-ups for a standard F-Series Condensing Unit hooked up with an air handling unit.

When option CRS is required, consult SKM for certified Wiring Diagram and Electrical Hook-up (see Page 14 for Capacity Control Steps - option CRS). All field wiring must be done in accordance with applicable local and national codes. For maximum recommended fuse sizes and minimum circuit amperes for cable sizing, see Tables 10 - 14 (pages 17-19) of this bulletin.

Field Wiring Schematic



Typical Wiring Diagram



- | | |
|-----|----------------------------|
| C | CONTACTOR |
| CCH | CRANK CASE HEATER |
| CF | CONTROL FUSE |
| CFM | CONDENSER FAN MOTOR |
| CM | COMPRESSOR MOTOR |
| CR | CONTROL RELAY |
| CS | CONTROL SWITCH |
| EFM | EVAPORATOR FAN MOTOR |
| F | POWER CIRCUIT FUSE |
| FCS | FAN CYCLING SWITCH |
| HPS | HIGH PRESSURE SWITCH |
| LPS | LOW PRESSURE SWITCH |
| LSV | LIQUID LINE SOLENOID VALVE |
| USV | UNLOADER SOLENOID VALVE |
| MP | MOTOR PROTECTOR |
| OFH | OIL FAILURE HEATER |
| OPS | OIL PRESSURE SWITCH |
| OL | OVERLOAD RELAY |
| TDR | TIME DELAY RELAY |
| TFR | TRANSFORMER |
| TH | THERMOSTAT |
| TR | TIMER |

- FIELD WIRING & FIELD SUPPLIED DEVICES
- ADDITIONAL WIRING FOR DUAL COMPRESSOR WITH 4 FANS

OPTIONAL FEATURES

- | | |
|-----|------------------------|
| PWS | PART WINDING START |
| VMM | VOLTAGE MONITOR MODULE |
| USK | UNLOAD START KIT |
| RHM | RUN HOUR METER |

SKM Air Cooled Condensing Units F-Series - R22

ELECTRICAL DATA

380 - 415V / 3 Ph / 50 Hz (Tolerance : 342 - 440V)

Model ACUF	Unit Characteristic				Compressor				Condenser Fan Motor		
	MFA	MCA	ICF		Quantity	MOC	RLA Each	LRA Each	Quantity	FLA Each	LRA Each
			DOL	PWS							
5011	63	30	140	109	1	21	21	121	1	4.2	18.7
5015	80	39	146	114	1	29	28	129	2	2.2	8.7
5021	100	58	236	187	1	42	40	199	2	4.2	18.7
5023	100	56	150	120	2	21	21	121	2	4.2	18.7
5026	100	69	177	145	1+1	29+21	28+21	129+121	3	4.2	18.7
5030	125	76	184	152	2	29	28	129	3	4.2	18.7
5032	160	89	360	284	1	64	61	304	3	4.2	18.7
5033	125	84	247	197	1+1	42+21	40+21	199+121	3	4.2	18.7
5036	160	91	254	204	1+1	42+29	40+28	199+129	3	4.2	18.7
5038	200	110	360	284	1	81	78	304	3	4.2	18.7
5042	160	104	275	225	2	42	40	199	4	3.4	14.4
5043	200	111	361	285	1+1	64+21	61+21	304+121	4	3.4	14.4
5045	200	117	516	447	1	88	83	458	4	3.4	14.4
5051	315	152	551	479	1	108	108	476	4	4.2	18.7
5052	250	142	378	302	1+1	81+29	78+28	304+129	4	4.2	18.7
5053	200	133	390	314	1+1	64+42	61+40	304+199	4	4.2	18.7
5060	250	154	390	314	1+1	81+42	78+40	304+199	4	4.2	18.7
5064	250	154	411	335	2	64	61	304	4	4.2	18.7
5070	315	179	418	342	1+1	81+64	78+61	304	6	3.4	14.4
5074	315	201	451	375	2	81	78	304	6	4.2	18.7
5075	315	190	588	519	1+1	88+64	83+61	458+304	6	4.2	18.7
5080	315	207	605	536	1+1	88+81	83+78	458+304	6	4.2	18.7
5085	400	221	606	534	1+1	108+64	108+61	476+304	6	4.2	18.7
5090	315	212	610	541	2	88	83	458	6	4.2	18.7
5095	400	245	630	559	1+1	108+88	108+83	476+458	8	3.4	14.4
5105	400	277	676	604	2	108	108	476	8	4.2	18.7

Table 10

440V / 3 Ph / 50 Hz (Tolerance : 400 - 462V)

Model ACUF	Unit Characteristic				Compressor				Condenser Fan Motor		
	MFA	MCA	ICF		Quantity	MOC	RLA Each	LRA Each	Quantity	FLA Each	LRA Each
			DOL	PWS							
5011	63	30	143	111	1	21	21	127	1	3.6	16.0
5015	80	39	151	117	1	29	28	135	2	1.9	7.9
5021	100	57	241	189	1	42	40	209	2	3.6	16.0
5023	100	54	155	123	2	21	21	127	2	3.6	16.0
5026	100	67	179	145	1+1	29+21	28+21	135+127	3	3.6	16.0
5030	125	74	186	152	2	29	28	135	3	3.6	16.0
5032	160	87	367	287	1	64	61	319	3	3.6	16.0
5033	125	82	253	201	1+1	42+21	40+21	209+127	3	3.6	16.0
5036	160	89	260	208	1+1	42+29	40+28	209+135	3	3.6	16.0
5038	200	108	367	287	1	81	78	319	3	3.6	16.0
5042	160	101	281	228	2	42	40	209	4	2.7	13.1
5043	200	108	372	292	1+1	64+21	61+21	319+127	4	2.7	13.1
5045	200	115	533	461	1	88	83	481	4	2.7	13.1
5051	315	149	564	489	1	108	108	500	4	3.6	16.0
5052	250	140	386	306	1+1	81+29	78+28	319+135	4	3.6	16.0
5053	200	131	398	318	1+1	64+42	61+40	319+209	4	3.6	16.0
5060	250	152	398	318	1+1	81+42	78+40	319+209	4	3.6	16.0
5064	250	152	419	339	2	64	61	319	4	3.6	16.0
5070	315	175	427	348	1+1	81+64	78+61	319	6	2.7	13.1
5074	315	197	456	376	2	81	78	319	6	3.6	16.0
5075	315	186	601	529	1+1	88+64	83+61	481+319	6	3.6	16.0
5080	315	203	618	546	1+1	88+81	83+78	481+319	6	3.6	16.0
5085	400	218	620	545	1+1	108+64	108+61	500+319	6	3.6	16.0
5090	315	208	623	551	2	88	83	481	6	3.6	16.0
5095	400	240	646	571	1+1	108+88	108+83	500+481	8	2.7	13.1
5105	400	272	686	611	2	108	108	500	8	3.6	16.0

Table 11



SKM Air Cooled Condensing Units F-Series - R22

ELECTRICAL DATA

380 V / 3 Ph / 60 Hz (Tolerance : 342 - 418V)

Model ACUF	Unit Characteristic				Compressor				Condenser Fan Motor		
	MFA	MCA	ICF		Quantity	MOC	RLA Each	LRA Each	Quantity	FLA Each	LRA Each
			DOL	PWS							
6014	63	37	186	-	1	26	25	158	1	5.4	27.5
6018	100	49	176	-	1	35	34	152	2	3.2	12.2
6025	125	71	283	226	1	50	48	228	2	5.4	27.5
6027	100	67	194	-	2	26	25	158	2	5.4	27.5
6031	125	84	215	-	1+1	35+26	34+25	152+158	3	5.4	27.5
6035	160	93	224	-	2	35	34	152	3	5.4	27.5
6037	200	107	415	332	1	76	73	332	3	5.4	27.5
6038	160	101	291	-	1+1	50+26	48+25	228+158	3	5.4	27.5
6042	160	110	300	-	1+1	50+35	48+34	228+152	3	5.4	27.5
6044	250	132	415	332	1	97	93	332	3	5.4	27.5
6050	200	123	316	259	2	50	48	228	4	3.8	16.0
6051	250	131	397	-	1+1	76+26	73+25	332+158	4	3.8	16.0
6053	315	148	-	493	1	106	106	505	4	3.8	16.0
6061	315	183	-	602	1	130	129	579	4	5.4	27.5
6062	315	172	432	-	1+1	97+35	93+34	332+152	4	5.4	27.5
6063	250	161	446	363	1+1	76+50	73+48	332+228	4	5.4	27.5
6070	315	186	446	363	1+1	97+50	93+48	332+228	4	5.4	27.5
6075	315	186	471	388	2	76	73	332	4	5.4	27.5
6080	315	212	464	381	1+1	97+76	93+73	332	6	3.8	16.0
6085	400	242	524	441	2	97	93	332	6	5.4	27.5
6090	400	238	677	601	1+1	106+76	106+73	505+332	6	5.4	27.5
6095	400	258	697	621	1+1	106+97	106+93	505+332	6	5.4	27.5
6100	400	267	751	664	1+1	130+76	129+73	579+332	6	5.4	27.5
6105	400	271	-	634	2	106	106	505	6	5.4	27.5
6110	500	298	-	677	1+1	130+106	129+106	579+505	8	3.8	16.0
6120	500	333	-	753	2	130	129	579	8	5.4	27.5

Table 12

460V / 3 Ph / 60 Hz (Tolerance : 396 - 528V)

Model ACUF	Unit Characteristic				Compressor				Condenser Fan Motor		
	MFA	MCA	ICF		Quantity	MOC	RLA Each	LRA Each	Quantity	FLA Each	LRA Each
			DOL	PWS							
6014	63	31	145	116	1	21	21	113	1	5.0	31.5
6018	80	41	152	121	1	29	28	123	2	2.9	14.4
6025	100	60	263	213	1	42	40	200	2	5.0	31.5
6027	100	57	144	116	2	21	21	113	2	5.0	31.5
6031	100	71	186	155	1+1	29+21	28+21	123+113	3	5.0	31.5
6035	125	78	193	162	2	29	28	123	3	5.0	31.5
6037	160	91	387	314	1	64	61	292	3	5.0	31.5
6038	160	86	263	213	1+1	42+21	40+21	200+113	3	5.0	31.5
6042	160	93	270	220	1+1	42+29	40+28	200+123	3	5.0	31.5
6044	200	113	387	314	1	81	78	292	3	5.0	31.5
6050	160	105	282	232	2	42	40	200	4	3.7	17.3
6051	200	112	355	282	1+1	64+21	61+21	292+113	4	3.7	17.3
6053	250	125	527	459	1	88	88	458	4	3.7	17.3
6061	315	155	604	532	1	108	108	478	4	5.0	31.5
6062	250	145	393	320	1+1	81+29	78+28	292+123	4	5.0	31.5
6063	200	136	405	332	1+1	64+42	61+40	292+200	4	5.0	31.5
6070	250	158	405	332	1+1	81+42	78+40	292+200	4	5.0	31.5
6075	250	157	426	353	2	64	61	292	4	5.0	31.5
6080	315	181	416	343	1+1	81+64	78+61	292	6	3.7	17.3
6085	315	206	480	407	2	81	78	292	6	5.0	31.5
6090	315	201	629	560	1+1	88+64	88+61	458+292	6	5.0	31.5
6095	315	218	646	577	1+1	88+81	88+78	458+292	6	5.0	31.5
6100	400	226	649	577	1+1	108+64	108+61	478+292	6	5.0	31.5
6105	400	228	656	587	2	88	88	458	6	5.0	31.5
6110	400	253	650	578	1+1	108+88	108+88	478+458	8	3.7	17.3
6120	400	283	732	660	2	108	108	478	8	5.0	31.5

Table 13

SKM Air Cooled Condensing Units F-Series - R22

ELECTRICAL DATA

220V / 3 Ph / 60 Hz (Tolerance : 187 - 253V)

Model ACUF	Unit Characteristic				Compressor				Condenser Fan Motor		
	MFA	MCA	ICF		Quantity	MOC	RLA Each	LRA Each	Quantity	FLA Each	LRA Each
			DOL	PWS							
6014	125	63	322	-	1	45	43	274	1	9.4	47.6
6018	160	85	305	-	1	61	59	263	2	5.5	21.1
6025	250	124	514	409	1	91	84	419	2	9.4	47.6
6027	160	116	336	-	2	45	43	274	2	9.4	47.6
6031	250	145	372	-	1+1	61+45	59+43	263+274	3	9.4	47.6
6035	250	161	388	-	2	61	59	263	3	9.4	47.6
6037	315	188	-	601	1	139	128	611	3	9.4	47.6
6038	315	176	528	-	1+1	91+45	84+43	419+274	3	9.4	47.6
6042	315	192	544	-	1+1	91+61	84+59	419+263	3	9.4	47.6
6044	400	232	-	601	1	177	163	611	3	9.4	47.6
6050	315	216	572	467	2	91	84	419	4	6.7	27.7
6051	400	230	723	-	1+1	139+45	128+43	611+274	4	6.7	27.7
6053	500	258	-	927	1	193	185	960	4	6.7	27.7
6061	630	320	-	1042	1	237	226	1002	4	9.4	47.6
6062	500	300	784	-	1+1	177+61	163+59	611+263	4	9.4	47.6
6063	500	282	809	656	1+1	139+91	128+84	611+419	4	9.4	47.6
6070	500	325	809	656	1+1	177+91	163+84	611+419	4	9.4	47.6
6075	500	326	-	700	2	139	128	611	4	9.4	47.6
6080	630	372	-	689	1+1	177+139	163+128	611	6	6.7	27.7
6085	630	423	-	792	2	177	163	611	6	9.4	47.6
6090	630	416	-	1115	1+1	193+139	185+128	960+611	6	9.4	47.6
6095	800	451	-	1150	1+1	193+177	185+163	960+611	6	9.4	47.6
6100	800	467	-	1151	1+1	237+139	226+128	1002+61	6	9.4	47.6
6105	800	473	-	1172	2	193	185	960	6	9.4	47.6
6110	800	521	-	1174	1+1	237+193	226+185	1002+96	8	6.7	27.7
6120	800	584	-	1306	2	237	226	1002	8	9.4	47.6

Table 14

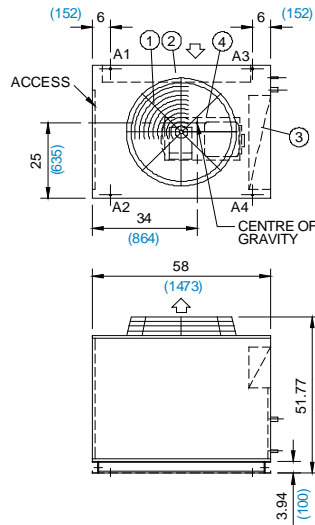
Voltage imbalance between phases to be < 2%

LEGEND :

- MFA** Maximum Fuse Amperes
- MCA** Minimum Circuit Amperes (for wire sizing). Complies with NEC Article 430.24
- RLA** Rated Load Amperes at 45°F (7.2°C) S.S.T and 115°F (46°C) ambient temperature.
- MOC** Maximum Operating Current
- ICF** Instantaneous Current Flow
- DOL** For Direct On Line Starting of Compressor
- PWS** For Part Winding Start of Compressor
- LRA** Locked Rotor Amperes (DOL)
- FLA** Full Load Amperes

SKM Air Cooled Condensing Units F-Series - R22

Dimensional Data



MODEL ACUF-	CONNECTION SIZE, Ø		LOAD AT EACH POINT Lbs/ kg				TOTAL WEIGHT Lbs/ kg
	SUC.#1	LIQ.#1	A1	A2	A3	A4	
5011	1 3/8	5/8	225	155	320	250	950
6014	(35)	(16)	102	70	145	114	431

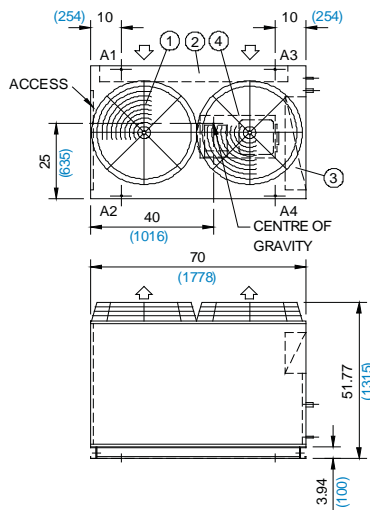
Table 15

LEGEND

- ① COND. FAN
- ② COND. COIL
- ③ CONTROL PANEL
- ④ COMPRESSOR

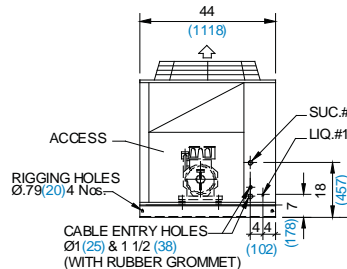
A1-A4 ARE LOADING POINTS Ø.79 (20)
ALL DIMENSIONS ARE IN INCHES (MM)

CERTIFIED DRAWINGS ARE
AVAILABLE ON REQUEST



MODEL ACUF-	CONNECTION SIZE, Ø		LOAD AT EACH POINT Lbs/ kg				TOTAL WEIGHT Lbs/ kg
	SUC.#1	LIQ.#1	A1	A2	A3	A4	
5015	1 5/8	7/8	265	185	395	295	1140
6018	(41)	(22)	120	84	180	134	518

Table 16



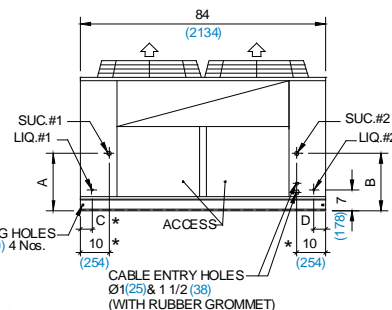
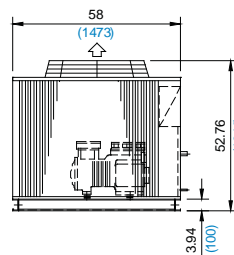
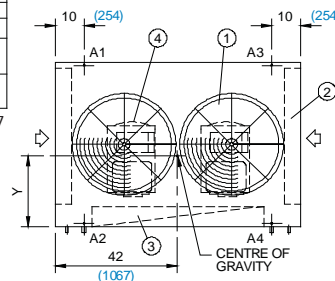
MODEL ACUF-	A	B	C	D	Y	CONNECTION SIZE, Ø			
						CIRCUIT 1		CIRCUIT 2	
						SUC.#1	LIQ.#1	SUC.#2	LIQ.#2
* 5021	20	-	12	-	25	1 5/8	7/8	-	-
6025	(508)	-	(305)	-	(635)	(41)	(22)	-	-
5023	18	18	4	4	28	1 3/8	5/8	1 3/8	5/8
6027	(457)	(457)	(102)	(102)	(711)	(35)	(16)	(35)	(16)

Table 17

MODEL ACUF-	LOAD AT EACH POINT Lbs/ kg				TOTAL WEIGHT Lbs/ kg
	A1	A2	A3	A4	
5021	295	395	295	395	1380
6025	134	180	134	180	628
5023	335	490	335	490	1650
6027	152	223	152	223	750

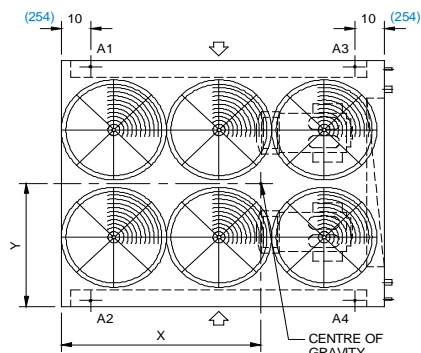
Table 18

* MODEL WITH 1-COMPRESSOR
DIM. 12" INSTEAD OF 10" C FOR 1-COMP. MODEL



SKM Air Cooled Condensing Units F-Series - R22

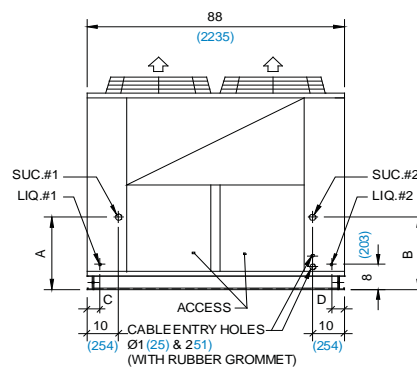
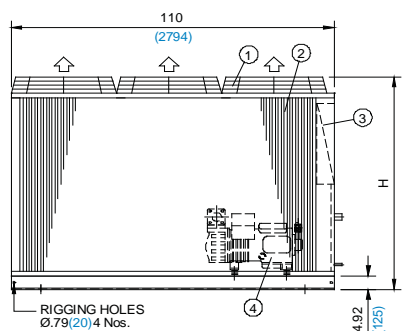
Dimensional Data



MODEL ACUF-	H	A	B	C	D	X	Y	CONNECTION SIZE, Ø				LOAD AT EACH POINT Lbs/ kg				TOTAL WEIGHT Lbs/kg
								CIRCUIT 1		CIRCUIT 2		A1	A2	A3	A4	
								SUC.#1	LIQ.#1	SUC.#2	LIQ.#2					
5070 6080	85.75 (2178)	24 (610)	21 (533)	10 (254)	10 (254)	65 (1651)	44 (1118)	2 1/8 (54)	1 1/8 (28)	2 1/8 (54)	7/8 (22)	650 295	660 300	1065 484	1100 500	3475 1579
5074 6085	73.74 (1873)	24 (610)	4 (102)		10 (254)	67 (1702)	44 (1118)	2 1/8 (54)	1 1/8 (28)	2 1/8 (54)	1 1/8 (28)	665 302	665 302	1105 502	1105 502	3540 1608
5075 6090		24 (610)	4 (102)		10 (254)	68 (1727)	42 (1067)	2 5/8 (67)	1 1/8 (28)	2 1/8 (54)	7/8 (22)	660 300	715 325	1050 477	1235 561	3660 1663
5080 6095	85.75 (2178)	26 (660)	24 (610)	10 (254)	10 (584)	67 (1702)	44 (1041)	2 5/8 (67)	1 1/8 (28)	2 1/8 (54)	1 1/8 (28)	716 325	763 347	1128 513	1283 583	3890 1768
5085 6100			21 (533)			67 (1702)	44 (1041)	2 5/8 (67)	1 1/8 (28)	2 1/8 (54)	7/8 (22)	708 322	772 351	1100 500	1320 600	3900 1773
5090 6105	93.74 (2381)		26 (660)	4 (102)		68 (1727)	44 (1118)	2 5/8 (67)	1 1/8 (28)	2 5/8 (67)	1 1/8 (28)	775 352	775 352	1315 598	1315 598	4180 1900

A1-A4 ARE LOADING POINTS Ø.79 (20)

Table 21

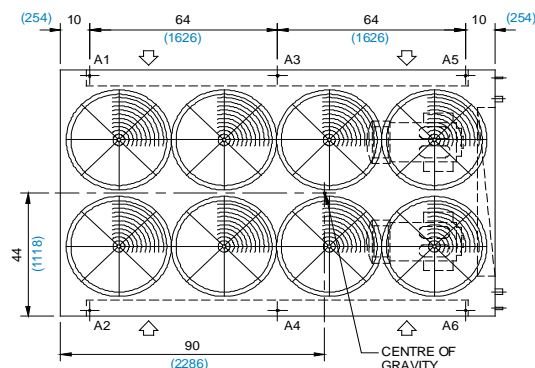


LEGEND

- ① COND. FAN
- ② COND. COIL
- ③ CONTROL PANEL
- ④ COMPRESSOR

ALL DIMENSIONS ARE IN INCHES (MM)

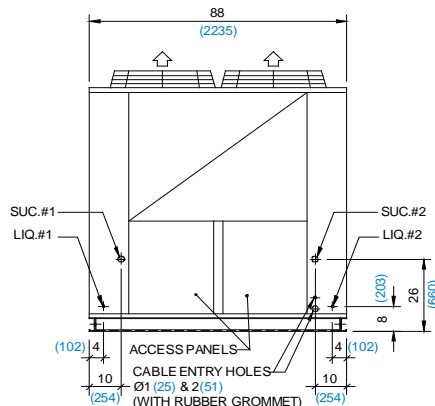
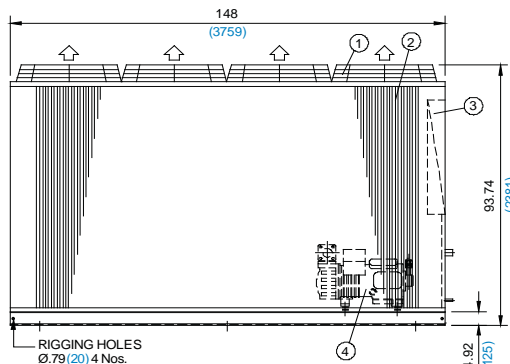
CERTIFIED DRAWINGS ARE
AVAILABLE ON REQUEST



MODEL ACUF-	CONNECTION SIZE, Ø				LOAD AT EACH POINT Lbs/ kg						TOTAL WEIGHT Lbs/ kg
	CIRCUIT 1		CIRCUIT 2		A1	A2	A3	A4	A5	A6	
	SUC.#1	LIQ. #1	SUC.#2	LIQ. #2							
5095 6110	2 5/8 (67)	1 1/8 (28)	2 5/8 (67)	1 1/8 (28)	500 227	500 227	710 323	725 330	1190 541	1225 557	4850 2205
5105 6120					500 227	500 227	725 330	725 330	1225 557	1225 557	4900 2228

A1-A6 ARE LOADING POINTS Ø.79 (20)

Table 22



SKM Air Cooled Condensing Units F-Series - R22

Installation & Application Data

Location/Space Requirements

SKM F-Series Condensing Units should be located on a flat base, either on the ground or on a roof top, which is strong enough to hold the operating weight of the unit.

The most important consideration when deciding upon the location of Air Cooled equipment is the provision for supply of ambient air to the condenser and removal of heated air from the condenser.

For recommended clearances refer to Figure A and Table 23 below. Where this essential requirement is not adhered to, it will result in a higher condensing temperature which causes poor operation, and eventual failure of the equipment. Units should not be located in the vicinity of steam, hot air or fume exhausts.

F-Series Condensing Units should be sited away from noise sensitive places. Units may be mounted on anti vibration mounts suitable for operating weight, to prevent vibration and noise from being transmitted into the building structure.

Orientation of the F-Series Condensing Units, if possible, to be so that prevailing winds blow against the control panel or access end of the unit rather than against the condenser coil(s). For parallel location of multiple F-Series a minimum 50% more than the recommended clearances as shown below should be maintained.

There should be no obstruction above the fans and no ductwork should be connected to any fan outlet.

The F-Series Air Cooled Condensing Units are meant for outdoor installation and may not be protected any further from the elements. However, on ground level installations option CGP may be desirable for protection of the condenser coil against vandalism.

Recommended Clearances

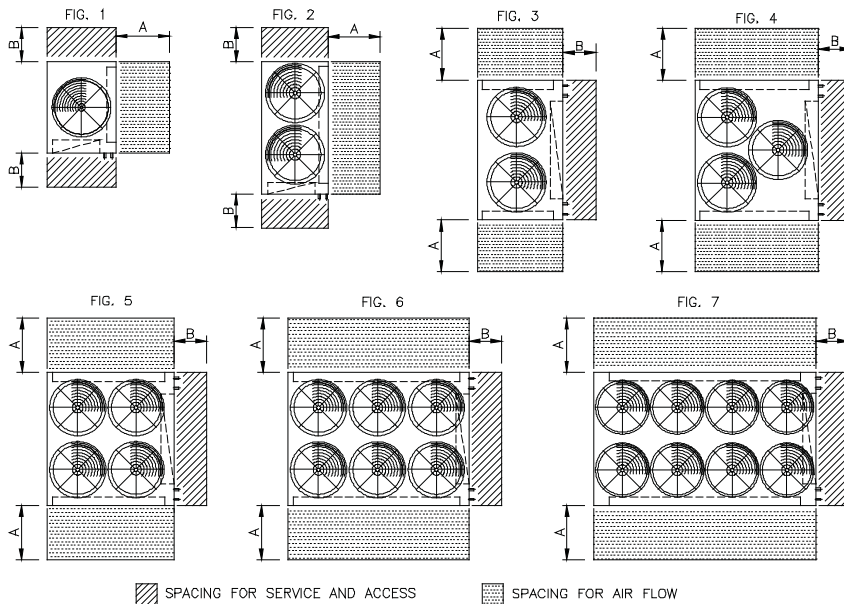


Figure A

Model ACUF		Figure	A inches [mm]	B inches [mm]
5011	6014	1	48 [1219]	30 [762]
5015	6018	2		
5021	6025	3		
5023	6027			
5026	6031	4		
5030	6035			
5032	6037			
5033	6038			
5036	6042			
5038	6044		64 [1626]	
5042	6050			
5043	6051			
5045	6053			
5051	6061	5		
5052	6062			
5053	6063			
5060	6070			
5064	6075			
5070	6080			
5074	6085	6	60 [1524]	36 [914]
5075	6090			
5080	6095			
5085	6100			
5090	6105			
5095	6110			
5105	6120	7	80 [2032]	

Table 23

SKM Air Cooled Condensing Units F-Series - R22

Typical Refrigeration Piping

Legend

1. Expansion Valve
2. Sight Glass
3. Solenoid Valve
4. Filter Drier
5. Shut Off Valve
6. Liquid Line
7. Suction Line

Single Circuit Unit Shown. For Dual circuit units, piping of second circuit is similar.

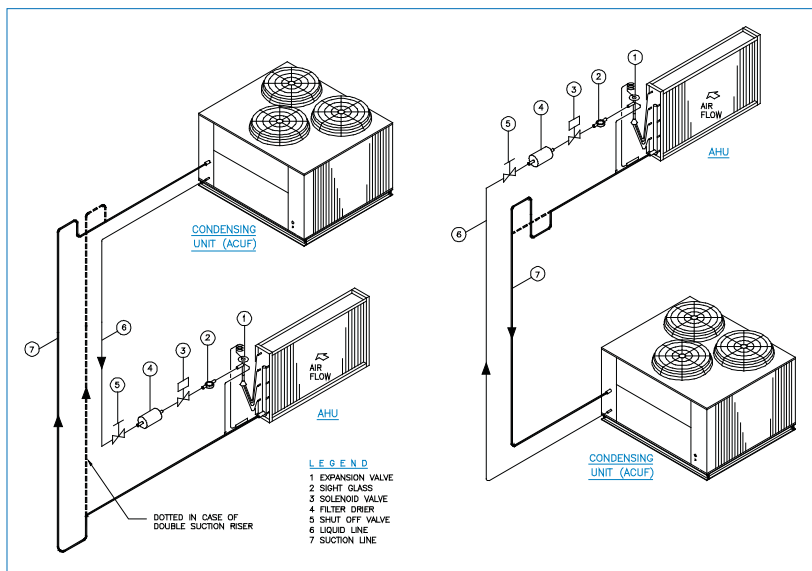


Figure B

Refrigerant Piping

Correct design and size of refrigerant piping is necessary for proper operation. The refrigerant piping generally should be designed to accomplish the following:

- a. To ensure proper refrigerant feed to the evaporator.
- b. To provide practical refrigerant line sizes without excessive pressure drop.
- c. To maintain uniform return of lubricating oil to the compressor.
- d. To prevent refrigerant from entering the compressor and causing compressor damage due to "slugging".

Field Expansion Valve Selection

The following recommendations should be taken into consideration when selecting expansion valves in field.

1. Expansion valves should be installed as close to the evaporator as possible, mounted directly to the distributor.
2. The following possible sources of pressure drop to be considered:
 - a. Friction losses through refrigerant lines.
 - b. Pressure drop across valves and controls.
 - c. Pressure drop due to vertical lift of liquid line for R-22; 1°F (0.55°C) sub cooling must be allowed for each 5.5 ft (1.7m) vertical rise in order to avoid flash gas forming due to the weight of the column of liquid refrigerant.

SKM F-Series units are designed with a sub cooling circuit enough to sub cool the liquid 12°F (6.6 °C), which gives the liquid maximum 66 ft. (20m) lift without additional sub cooling. Liquid suction heat exchanger can be used for additional sub cooling in order to avoid flash gas forming.

Matching DX Coil Selection

For single circuit F-Series, the DX coil selection in a MAH or other air handler from SKM should be based on total capacity. For dual circuit F-Series, extra care should be exercised and correspondingly split, by face area or number of rows to correspond and match the capacity split available in the dual circuited F-Series selected. For optimum matching the DX coil should be ordered from SKM as well.

SKM provides correct no. of feeds and circuits and properly sized distribution to ensure the correct split on the DX coil is made available to match the particular selected F-Series model.

SKM Air Cooled Condensing Units

F-Series - R22

Recommended Refrigerant Line Sizes

Model ACUF		Liquid Line, Inches		Suction Line, Inches		Double Suction Risers, Inches	
		Circuit 1	Circuit 2	Circuit 1	Circuit 2	Circuit 1	Circuit 2
5011	6014	5/8	-	1 3/8	-	1 1/8 - 7/8	-
5015	6018	7/8	-	1 5/8	-	1 1/8 - 1 1/8	-
5021	6025	7/8	-	1 5/8	-	1 1/8 - 1 1/8	-
5023	6027	5/8	5/8	1 3/8	1 3/8	1 1/8 - 7/8	1 1/8 - 7/8
5026	6031	7/8	5/8	1 5/8	1 3/8	1 1/8 - 1 1/8	1 1/8 - 7/8
5030	6035	7/8	7/8	1 5/8	1 5/8	1 1/8 - 1 1/8	1 1/8 - 1 1/8
5032	6037	7/8	-	2 1/8	-	1 5/8 - 1 3/8	-
5033	6038	7/8	5/8	1 5/8	1 3/8	1 1/8 - 1 1/8	1 1/8 - 7/8
5036	6042	7/8	7/8	1 5/8	1 5/8	1 1/8 - 1 1/8	1 1/8 - 1 1/8
5038	6044	1 1/8	-	2 1/8	-	1 5/8 - 1 3/8	-
5042	6050	7/8	7/8	1 5/8	1 5/8	1 1/8 - 1 1/8	1 1/8 - 1 1/8
5043	6051	7/8	5/8	2 1/8	1 3/8	1 5/8 - 1 3/8	1 1/8 - 7/8
5045	6053	1 1/8	-	2 5/8	-	2 1/8 - 1 5/8	-
5051	6061	1 1/8	-	2 5/8	-	2 1/8 - 1 5/8	-
5052	6062	1 1/8	7/8	2 1/8	1 5/8	1 5/8 - 1 3/8	1 1/8 - 1 1/8
5053	6063	7/8	7/8	2 1/8	1 5/8	1 5/8 - 1 3/8	1 1/8 - 1 1/8
5060	6070	1 1/8	7/8	2 1/8	1 5/8	1 5/8 - 1 3/8	1 1/8 - 1 1/8
5064	6075	7/8	7/8	2 1/8	2 1/8	1 5/8 - 1 3/8	1 5/8 - 1 3/8
5070	6080	1 1/8	7/8	2 1/8	2 1/8	1 5/8 - 1 3/8	1 5/8 - 1 3/8
5074	6085	1 1/8	1 1/8	2 1/8	2 1/8	1 5/8 - 1 3/8	1 5/8 - 1 3/8
5075	6090	1 1/8	7/8	2 5/8	2 1/8	2 1/8 - 1 5/8	1 5/8 - 1 3/8
5080	6095	1 1/8	1 1/8	2 5/8	2 1/8	2 1/8 - 1 5/8	1 5/8 - 1 3/8
5085	6100	1 1/8	7/8	2 5/8	2 1/8	2 1/8 - 1 5/8	1 5/8 - 1 3/8
5090	6105	1 1/8	1 1/8	2 5/8	2 5/8	2 1/8 - 1 5/8	2 1/8 - 1 5/8
5095	6110	1 1/8	1 1/8	2 5/8	2 5/8	2 1/8 - 1 5/8	2 1/8 - 1 5/8
5105	6120	1 1/8	1 1/8	2 5/8	2 5/8	2 1/8 - 1 5/8	2 1/8 - 1 5/8

Table 24

SKM F-Series Condensing Unit must be located as close to the DX coil as possible. On dual compressor models the DX coil circuits must be selected to balance and match Condensing Unit circuits.

Recommended practice is to size liquid lines for 1°F (2.9 Psi) change in saturation temperature (pressure drop). The normal liquid lift without refrigeration flashing before the expansion valve at full load conditions is about 50 feet (15m).

A replaceable element filter-drier should be furnished and installed in the field before the expansion valve to aid in maintaining the system.

Suction lines should preferably be sized for 2°F (2.9 Psi) change in saturation temperature (pressure drop). Maximum allowable saturated suction gas temperature for Condensing Units is 50°F (10°C) at any condensing temperature.

Suction lines should be insulated preferably jointly with the liquid lines.

Certain applications (cond. unit above the DX coil) and where optional capacity reduction CRS has been ordered, may require the use of double suction risers for oil return. Refer to ASHRAE Handbook for proper sizing procedures.

Typical piping layouts are as shown in Figure B on Page 24.

SKM F-Series Condensing Units are designed for satisfactory operation with single suction line. In some cases of low load operation, it is recommended connecting a double suction riser for applications having option CRS.

1. Suction Line sizing selection recommendation in Table 24 is based on maximum 100 ft (30m) equivalent length, 3 psi (2°F) [20kPa (1.1°C)] pressure drop.
2. Double suction risers, for applications with systems having large variations in capacity or operation with option CRS, are recommended to ensure proper oil flow up and return to compressor.
3. Liquid line sizing selection recommendation above is based on maximum 100ft (30m) equivalent length, 3 psi (1°F) [20 kPa (0.5°C)] pressure drop.
4. Recommended line sizes in Table 24 are for guidance only. For detailed proper piping, consult recognized piping references like ASHRAE Guide and Data Book for assistance.

SKM is not responsible for faulty or improper design or sizing of refrigerant lines. The above recommendations do not incorporate necessary slopes, etc. that may be required on horizontal risers etc.

SKM Air Cooled Condensing Units F-Series - R22

GUIDE SPECIFICATIONS

GENERAL FEATURES

Condensing units shall be composed of compressor(s), coil(s) with fan(s), refrigerant piping, electrical components & enclosing cabinet in one piece. These units shall be factory assembled, internally wired, refrigerant charged with R22, tested under strict quality standards & are suitable for use in systems with indoor units connected to remote condensing units.

Units should be capable to operate from 50°F (10°C) to 125°F (52°C) ambient temperature, and shall be selected in accordance with project requirements and installed as per Installation, Operation & Maintenance Manual.

COMPRESSOR(S)

Compressor(s) shall be of high energy efficiency ratio, fully accessible, semi hermetic reciprocating type with Discus® valves, equipped with crankcase heater, oil pump, refrigerant gas cooled electric motor, preset internal relief valve, inherent thermistor motor protection, suction and discharge service valves, oil sight glass and shall be mounted on spring anti vibration mounts to minimize vibration transmissions. These compressors conform to DIN standards.

COIL(S)

Coil(s) shall be air cooled with integral sub-cooling circuit, constructed of seamless copper tubes 3/8" OD mechanically bonded to wavy Aluminum (Copper) fins with maximum 12 FPI (2.1mm) spacing. Coil(s) shall be tested against leakage by pressurizing air at 450 psig (3100 Kpa) in coil, under water, cleaned and dehydrated at the factory. Coil shall confirm to ARI-410/91.

CONDENSER FAN(S) & MOTOR(S)

The machine shall be furnished with direct driven propeller type discharging air upward condenser fans. Fans shall be constructed of corrosion resistant blades such as heavy gauge aluminum. The fan and drive shall be held in proper alignment. Fan assemblies shall be provided with heavy gauge, rust resistant steel wire fan guard. All condenser fans shall be individually, statically, and dynamically balanced for vibration free operation.

Condenser fan motor shall be Totally Enclosed Air Over (TEAO), 3-phase type, 6 poles with Class F insulation, Class B temperature rise and IP55 protection. Also, Motor shall be with permanently lubricated bearings and inherent corrosion resistance shaft.

REFRIGERANT PIPING

Refrigerant circuit piping shall be fabricated from ACR grade copper including vibration eliminator & hot gas discharge muffler. The piping connections shall be terminated with sealed & soldered copper pipe ends, which give much simplicity & ease to the installation.

CASING

Unit casing shall be made of zinc coated galvanized steel sheets conforming to JIS-G3302 and ASTMA653 which shall be phosphatized and then electrostatically dry powder coated of approximately 60 microns to provide an extremely tough, scratch resistance, excellent anti-corrosive protection that can pass 1000 Hrs in 5% salt spray testing at 95°F (35°C) and 95% relative humidity as per ASTM B117.

Unit casing shall be provided with access panels for easy service and maintenance of all units' parts.

CONTROL PANEL

The panel shall be factory wired in accordance with NEC 430 & 440, and conforms to IP54 requirements. Control Panel shall contain individual electrical components' contactors, overload relays, transformer, anti-recycling time delay relay, control circuit disconnect switch, power & control circuit terminal blocks, high / low pressure & oil failure switch.

(Please refer to page 5 for detailed information of Control Panel).

SKM Air Cooled Condensing Units F-Series - R22

NOTES:

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.